CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

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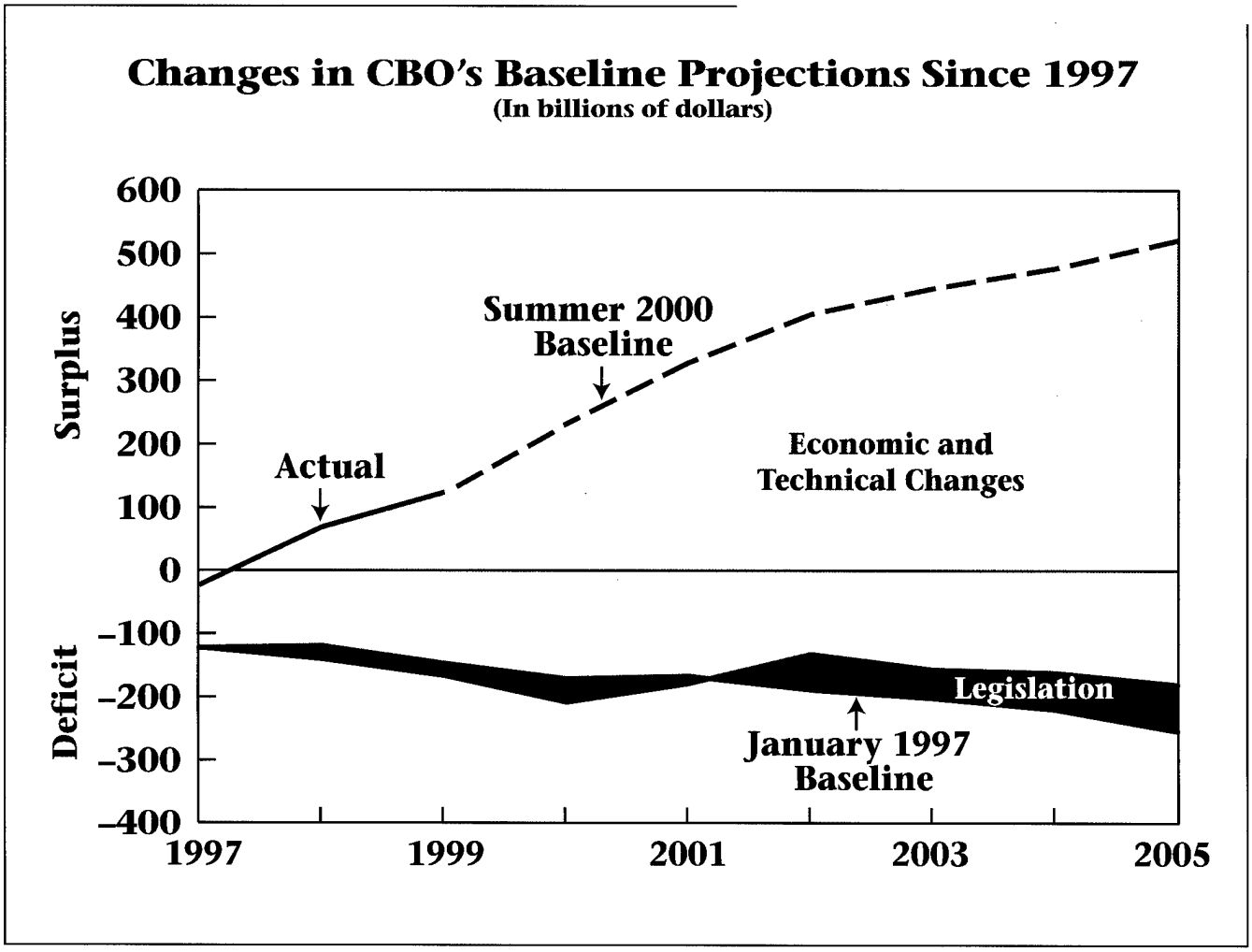
The Budget and Economic Outlook

UPDATE



A REPORT TO THE SENATE AND
HOUSE COMMITTEES ON THE BUDGET

JULY 2000

THE BUDGET AND ECONOMIC OUTLOOK: AN UPDATE

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NOTES

Unless otherwise indicated, all years referred to in Chapter 1 and Appendix C are fiscal years, and all years in Chapter 2 and Appendixes A and B are calendar years.

Numbers in the text and tables may not add up to totals because of rounding.

Preface

This volume is one of a series of reports on the state of the budget and the economy that the Congressional Budget Office (CBO) issues each year. It satisfies the requirement of section 202(e) of the Congressional Budget Act of 1974 that CBO submit periodic reports to the Committees on the Budget about fiscal policy and provide five-year baseline projections of the federal budget. In accordance with CBO's mandate to offer objective and impartial analysis, this report contains no recommendations.

The baseline spending projections were prepared by the staff of the Budget Analysis Division under the supervision of Robert Sunshine, Peter Fontaine, Janet Airis, Thomas Bradley, Kim Cawley, Paul Cullinan, Jeffrey Holland, and Michael Miller. The revenue estimates were prepared by the staff of the Tax Analysis Division under the supervision of Thomas Woodward, Mark Booth, and David Weiner. The budget outlook described in Chapter 1 was written by Barry Blom, Ellen Hays, Jeffrey Holland, Felix LoStracco, Laurie Pounder, and Kathy Ruffing.

The economic outlook presented in Chapter 2 was prepared by the Macroeconomic Analysis Division under the direction of Robert Dennis, Kim J. Kowalewski, and John F. Peterson. Kim J. Kowalewski wrote the chapter. John F. Peterson, Robert Arnold, and David Arnold carried out the economic forecast and projections. Ufuk Demiroglu, Douglas Hamilton, Juann Hung, Mark Lasky, Angelo Mascaro, Preston Miller, Benjamin Page, Frank Russek, Matthew Salomon, Robert Shackleton, John Sturrock, and Christopher Williams contributed to the analysis. David Arnold, Ezra Finkin, John McMurray, and Eric Warasta provided research assistance.

CBO's Panel of Economic Advisers commented on an early version of the economic forecast underlying this report. Members of the panel are Alan J. Auerbach, Michael Boskin, Barry P. Bosworth, John Cogan, Robert Dederick, William C. Dudley, Martin Feldstein, Robert J. Gordon, David Hale, Robert E. Hall, N. Gregory Mankiw, Allan Meltzer, William Niskanen, William D. Nordhaus, June E. O'Neill, Rudolph Penner, James Poterba, Robert Reischauer, Alice Rivlin, Joel Slemrod, John Taylor, and Martin B. Zimmerman. Although those outside advisers provided considerable assistance, they are not responsible for the contents of this report.

David Brauer wrote Appendix A, Matthew Salomon wrote Appendix B, Taman W. Morris wrote Appendix C, and David Arnold prepared the tables for Appendix D. Jeffrey Holland wrote the summary of the report.

Leah Mazade, Christian Spoor, and Christine Bogusz edited the report. Marion Curry, Linda Lewis Harris, Denise Jordan, Dorothy Kornegay, and Simone Thomas prepared early versions of the text and tables, and Kathryn Quattrone prepared the report for final publication. Laurie Brown produced the electronic versions for CBO's Web site.

Dan L. Crippen
Director

July 2000

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Summary

The exceptionally strong U.S. economy continues to generate much higher federal revenues than expected and progressively larger budget surpluses. As a result, the Congressional Budget Office (CBO) projects that the total budget surplus in fiscal year 2000 will reach $232 billion in the absence of legislation that would affect spending or tax receipts this year. (As this report was being prepared, the Congress was considering a supplemental appropriation bill that could add more than $10 billion to spending in 2000.) That estimate of the surplus is $53 billion higher than the estimate CBO published in April, largely because revenues have continued to outstrip expectations. If the $232 billion surplus materializes, it will equal 2.4 percent of gross domestic product (GDP), the largest share of the economy since 1948.

Perhaps more important to some policymakers, the on-budget surplus (which excludes the spending and revenues of Social Security and the Postal Service) is now expected to rise to $84 billion this year under current policies—over three times as much as CBO previously estimated. The on-budget surplus will rise to more than $100 billion in 2001, CBO projects, and to annual levels approaching or exceeding $400 billion by 2010, depending on assumptions about future levels of discretionary spending.

Summary Table 1.
CBO's Five-Year and Ten-Year Projections of the Surplus Under Alternative Versions of the Baseline (By fiscal year, in billions of dollars)

	Total, 2001-2005			Total, 2001-2010		
	Inflated Appropriations[a]	Frozen Appropriations[b]	Capped Appropriations[c]	Inflated Appropriations[a]	Frozen Appropriations[b]	Capped Appropriations[c]
On-Budget Surplus	695	969	1,179	2,173	3,349	3,387
Off-Budget Surplus	1,001	1,003	1,001	2,388	2,395	2,388
Total Surplus	1,696	1,971	2,180	4,561	5,744	5,774

SOURCE: Congressional Budget Office.

a. After adjustment for advance appropriations, this version of the baseline assumes that discretionary spending grows at the rate of inflation after 2000.

b. After adjustment for advance appropriations, this version of the baseline assumes that discretionary spending is frozen at the level enacted for 2000.

c. This version of the baseline assumes that discretionary spending equals CBO's estimates of the statutory caps on such spending through 2002 and grows at the rate of inflation thereafter.

Summary Table 2.
Changes in Projected Surpluses Since April Under Alternative Versions of the Baseline
(By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discretionary Spending Grows at the Rate of Inflation After 2000[a]											
April Total Budget Surplus	179	181	212	231	250	273	330	374	404	449	495
On-budget	26	15	29	36	42	48	92	121	138	169	202
Off-budget	153	166	182	195	209	225	238	253	266	280	293
Changes											
Total revenues	63	93	106	114	117	124	129	133	140	147	155
On-budget	64	86	94	100	103	109	113	117	122	129	135
Off-budget	-1	7	12	14	15	15	16	17	17	19	20
Total outlays	10	6	5	*	-1	-5	-10	-15	-22	-28	-34
On-budget	6	-1	-2	-7	-10	-13	-17	-22	-28	-34	-40
Off-budget	3	8	7	8	8	8	7	7	6	6	6
Total Effect on Surplus	53	87	101	113	119	129	138	149	161	175	190
On-budget	57	87	97	107	112	121	130	139	150	163	175
Off-budget	-4	*	4	6	6	8	8	10	11	13	15
July Total Budget Surplus	232	268	312	345	369	402	469	523	565	625	685
On-budget	84	102	126	143	154	169	222	260	288	332	377
Off-budget	149	165	186	202	215	232	247	263	278	293	307
Discretionary Spending Is Frozen at the Level Enacted for 2000[a]											
April Total Budget Surplus	179	192	237	273	315	358	436	502	558	629	704
On-budget	26	27	54	77	106	132	197	248	290	349	410
Off-budget	153	166	182	196	209	225	239	254	267	281	294
Changes											
Total revenues	63	93	106	114	117	124	129	133	140	147	155
On-budget	64	86	94	100	103	109	113	117	122	129	135
Off-budget	-1	7	12	14	15	15	16	17	17	19	20
Total outlays	10	4	-1	-10	-15	-21	-29	-38	-47	-57	-68
On-budget	6	-3	-8	-18	-23	-29	-36	-44	-53	-63	-73
Off-budget	3	7	7	8	8	8	7	7	6	6	5
Total Effect on Surplus	53	89	107	124	132	145	158	171	187	205	223
On-budget	57	89	103	117	126	138	149	161	176	192	208
Off-budget	-4	*	4	7	7	8	9	10	11	13	15
July Total Budget Surplus	232	281	344	397	447	503	594	673	745	834	927
On-budget	84	116	157	195	231	270	346	410	466	541	618
Off-budget	149	166	187	202	216	233	248	263	279	294	309

Summary Table 2.
Continued

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discretionary Spending Equals CBO's Estimates of the Statutory Caps Through 2002 and Grows at the Rate of Inflation Thereafter											
April Total Budget Surplus	179	239	297	324	348	379	440	487	527	580	634
On-budget	26	73	115	129	139	154	202	234	261	300	341
Off-budget	153	166	182	195	209	225	238	253	266	280	293
Changes											
Total revenues	63	93	106	114	117	124	129	133	140	147	155
On-budget	64	86	94	100	103	109	113	117	122	129	135
Off-budget	-1	7	12	14	15	15	16	17	17	19	20
Total outlays	10	3	-2	-9	-13	-19	-26	-35	-44	-54	-63
On-budget	6	-4	-10	-16	-21	-27	-34	-41	-50	-59	-69
Off-budget	3	8	7	8	8	8	7	7	6	6	6
Total Effect on Surplus	53	90	108	123	130	143	155	168	183	201	219
On-budget	57	90	104	116	124	135	146	158	172	188	204
Off-budget	-4	*	4	6	6	8	8	10	11	13	15
July Total Budget Surplus	232	329	405	446	478	522	595	655	711	781	853
On-budget	84	163	219	245	263	290	348	393	433	488	545
Off-budget	149	165	186	202	215	232	247	263	278	293	307

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

a. After adjustment for advance appropriations.

The Budget Outlook

As it did in previous reports this year, CBO has produced three variations of its baseline projections, which differ only in their treatment of discretionary spending (and the corresponding effect on net interest). The "inflated" variation assumes that budget authority for discretionary programs grows at the rate of inflation each year after 2000. The "freeze" variation assumes that discretionary budget authority each year equals the level enacted for 2000, plus the amount already enacted for 2001. The "capped" variation assumes that discretionary spending adheres to the statutory caps on such spending that are in effect through 2002 and increases at the rate of inflation thereafter.

The outlook for the budget is bright under all three variations of the baseline. CBO projects steadily mounting surpluses in the coming decade if current laws and policies do not change and the economy performs as CBO assumes. Over the five-year period from 2001 through 2005, off-budget surpluses are projected to add up to around $1 trillion (see Summary Table 1 on page xi). Cumulative on-budget surpluses range from $0.7 trillion under the inflated variation to $1.2 trillion under the capped variation.

Over the 10-year period through 2010, surpluses are projected to mount further. Off-budget surpluses from 2001 through 2010 total $2.4 trillion, and cumulative on-budget surpluses range from $2.2 trillion under the inflated variation to $3.4 trillion under the capped variation. Those large numbers should be ap-

proached with caution, however. Substantial deviations can result from incorrect economic and technical assumptions, not to mention the effect of future legislative action (which is not incorporated into baseline estimates).

The current budget outlook is more favorable than CBO projected in April, when it last published its budget baseline. Most of the improvement stems from revised estimates of revenues, which are now projected to be $63 billion higher in 2000 than previously anticipated (see Summary Table 2). Such increases continue throughout the next 10 years: CBO's revenue projections are up by a total of $554 billion between 2001 and 2005 and $1.26 trillion between 2001 and 2010. Those revisions can be attributed mainly to changes in CBO's economic forecast—in particular, stronger economic growth and slightly higher inflation.

Summary Table 3.
CBO's Economic Projections for Calendar Years 2000-2010

	Actual	Forecast		Projected Annual Average	
	1999	2000	2001	2001-2005	2006-2010
Nominal GDP (Percentage change)					
July 2000	5.7	7.0	5.3	4.8	4.6
January 2000	5.4	5.0	4.8	4.5	4.5
Real GDP[a] (Percentage change)					
July 2000	4.2	4.9	3.1	2.7	2.7
January 2000	3.9	3.3	3.1	2.7	2.8
GDP Price Index[b] (Percentage change)					
July 2000	1.4	2.1	2.1	2.0	1.8
January 2000	1.4	1.6	1.6	1.7	1.7
Consumer Price Index[c] (Percentage change)					
July 2000	2.2	3.1	2.7	2.7	2.5
January 2000	2.2	2.5	2.4	2.5	2.5
Unemployment Rate (Percent)					
July 2000	4.2	3.8	3.7	4.3	5.1
January 2000	4.2	4.1	4.2	4.6	5.2
Three-Month Treasury Bill Rate (Percent)					
July 2000	4.6	5.9	6.7	5.3	4.8
January 2000	4.6	5.4	5.6	5.1	4.8
Ten-Year Treasury Note Rate (Percent)					
July 2000	5.6	6.5	6.8	6.0	5.7
January 2000	5.6	6.3	6.4	5.9	5.7

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

NOTE: Percentage changes are year over year.

a. Based on chained 1996 dollars.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

Under the inflated variation, CBO is now expecting higher outlays in the next few years than it did in April, but lower outlays beginning in 2004 than it did previously. (Total outlays are lower beginning in 2002 under both the freeze and capped variations.) The near-term increase in outlay projections results chiefly from recent laws that raised spending on agricultural programs and repealed the earnings test for most Social Security recipients. Outlays in 2000 are projected to be $10 billion higher than CBO anticipated earlier; additional appropriations or the reversal of previously enacted shifts in the timing of certain payments could increase that figure. Most of the projected decline in outlays in later years is caused by lower interest payments that result from the increased projections of revenues.

The Economic Outlook

Despite the slowdown that seems to be occurring during the second quarter of this year, the U.S. economy remains robust, and CBO has changed some aspects of its economic forecast to reflect that strength. CBO now expects the levels of nominal and real (inflation-adjusted) GDP to be moderately higher in 2000 and 2001 than it anticipated in January, when it published its previous economic forecast. (CBO did not update its economic forecast in April.) Those higher estimates stem in part from the rapid growth of economic activity during the fourth quarter of calendar year 1999 and the first quarter of 2000, which took many private- and public-sector forecasters by surprise. In addition, the increases in inflation and interest rates seen this year have prompted CBO to raise its estimates of those indicators for 2000 and 2001.

The current CBO forecast assumes that growth of the nation's real GDP will average 4.9 percent this year and 3.1 percent next year (see Summary Table 3). Inflation, as measured by growth in the consumer price index for all urban consumers, is expected to increase from last year by almost a full percentage point, to 3.1 percent, before tapering off slightly next year. Interest rates on three-month Treasury bills and 10-year Treasury notes are expected to rise to around 6¾ percent by 2001.

Beyond 2001, CBO does not forecast the ups and downs of the economy. Instead, it simply extends historical patterns in such factors as the growth of the labor force and of productivity, which underlie the trend growth of real GDP. After incorporating those patterns, CBO projects that growth of nominal GDP will eventually fall to an average annual rate of 4.6 percent from 2006 through 2010. Growth of real GDP is estimated to average 2.7 percent per year during the latter part of the decade.

CBO projects that inflation in the 2006-2010 period will average 2.5 percent, or about half a percentage point lower than the forecast for this year. Interest rates similarly drop from today's levels to reach a longer-term equilibrium of 4.8 percent for three-month Treasury bills and 5.7 percent for 10-year Treasury notes.

Chapter One

The Budget Outlook

Assuming that current tax and spending policies remain in place, the Congressional Budget Office (CBO) projects that the government will record a total budget surplus of $232 billion in fiscal year 2000 (see Table 1-1). About $149 billion of that amount represents the surplus in off-budget accounts —mainly the Social Security trust funds, whose income and spending are accounted for separately from the rest of the government. The remaining $84 billion surplus comes from on-budget accounts. (Those estimates do not include the effects of additional appropriations for 2000 or the proposed reversal of previously enacted shifts in the timing of certain payments, both of which the Congress is considering and which together could reduce the total surplus for this year by $10 billion or more.)

The outlook is substantially brighter than it was in April, when CBO last updated its budget baseline.[1] Then, the 2000 surplus was projected to total $179 billion—$153 billion off-budget and $26 billion on-budget. All of the improvement in that surplus (and most of the improvement projected for later years) results from government revenues that have been higher than expected. Over the 10-year period from 2001 through 2010, CBO now anticipates an additional $1.26 trillion in revenues compared with the previous baseline. That increase can be attributed mostly to changes in CBO's economic forecast—in particular, stronger economic growth and slightly higher inflation (see Chapter 2).

According to the Deficit Control Act, CBO's baseline must project budget figures by assuming that current laws and policies remain unchanged (CBO also makes assumptions about the future performance of the economy). But for discretionary spending, whose level is set by the Congress and the President each year through appropriation acts, determining how to extrapolate current laws is difficult. Thus, CBO has once again produced three variations of its baseline, which differ only in their treatment of discretionary spending and its corresponding effect on net interest spending. The "inflated" variation assumes that each year after 2000, budget authority for discretionary programs grows at the rate of inflation (see Table 1-2). The "freeze" variation limits discretionary budget authority each year to the level enacted for 2000, plus the amount already enacted for 2001 (see Table 1-3). The "capped" variation assumes that discretionary spending complies with the statutory caps on such spending that are in effect through 2002 and increases at the rate of inflation thereafter (see Table 1-4).

Regardless of the path assumed for discretionary spending, CBO anticipates steadily mounting surpluses over the next 10 years. The on-budget surplus is projected to rise to between $377 billion (under the inflated variation) and $618 billion (under the freeze variation) in 2010. The total budget surplus is projected to reach $685 billion that year under the inflated

1. See Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2001* (April 2000).

variation, $853 billion under the capped variation, and $927 billion under the freeze variation. Those totals would represent 4.4 percent, 5.5 percent, and 6.0 percent, respectively, of the nation's gross domestic product (GDP).

Such lofty levels of total budget surpluses have been approached only once since World War II. In 1948, when spending dropped precipitously after the war effort, the surplus equaled 4.6 percent of GDP. By 1950, however, that surplus had disappeared.

Table 1-1.
The Budget Outlook Under Current Policies (By fiscal year, in billions of dollars)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total, 2001-2005	Total, 2001-2010
Discretionary Spending Grows at the Rate of Inflation After 2000[a]														
On-Budget Surplus	1	84	102	126	143	154	169	222	260	288	332	377	695	2,173
Off-Budget Surplus	124	149	165	186	202	215	232	247	263	278	293	307	1,001	2,388
Total Surplus	124	232	268	312	345	369	402	469	523	565	625	685	1,696	4,561
Total Surplus as a Percentage of GDP	1.4	2.4	2.6	2.9	3.0	3.1	3.2	3.6	3.9	4.0	4.2	4.4	n.a.	n.a.
Discretionary Spending Is Frozen at the Level Enacted for 2000[a]														
On-Budget Surplus	1	84	116	157	195	231	270	346	410	466	541	618	969	3,349
Off-Budget Surplus	124	149	166	187	202	216	233	248	263	279	294	309	1,003	2,395
Total Surplus	124	232	281	344	397	447	503	594	673	745	834	927	1,971	5,744
Total Surplus as a Percentage of GDP	1.4	2.4	2.7	3.2	3.5	3.8	4.1	4.6	5.0	5.3	5.6	6.0	n.a.	n.a.
Discretionary Spending Equals CBO's Estimates of the Statutory Caps Through 2002 and Grows at the Rate of Inflation Thereafter														
On-Budget Surplus	1	84	163	219	245	263	290	348	393	433	488	545	1,179	3,387
Off-Budget Surplus	124	149	165	186	202	215	232	247	263	278	293	307	1,001	2,388
Total Surplus	124	232	329	405	446	478	522	595	655	711	781	853	2,180	5,774
Total Surplus as a Percentage of GDP	1.4	2.4	3.2	3.7	3.9	4.0	4.2	4.6	4.8	5.0	5.3	5.5	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. After adjustment for advance appropriations.

Table 1-2.
CBO's Baseline Budget Projections, Assuming That Discretionary Spending Grows at the Rate of Inflation After 2000 (By fiscal year)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
						In Billions of Dollars						
Revenues												
Individual income	879	997	1,055	1,107	1,155	1,202	1,256	1,313	1,375	1,444	1,519	1,601
Corporate income	185	201	201	192	193	198	206	215	222	229	235	241
Social insurance	612	650	692	729	761	789	828	864	901	938	982	1,027
Other	151	160	161	174	181	191	196	202	206	215	224	233
Total	1,827	2,008	2,109	2,202	2,290	2,380	2,486	2,594	2,706	2,826	2,960	3,102
On-budget	1,383	1,529	1,601	1,666	1,729	1,795	1,873	1,955	2,040	2,132	2,235	2,344
Off-budget	444	479	509	537	561	585	613	639	666	694	725	758
Outlays												
Discretionary spending	575	608	638	656	676	693	713	728	744	765	785	804
Mandatory spending	978	1,023	1,072	1,125	1,191	1,262	1,344	1,402	1,479	1,571	1,666	1,770
Offsetting receipts	-80	-80	-86	-93	-95	-95	-100	-105	-111	-116	-122	-129
Net interest	230	224	218	201	174	151	126	101	81	72	64	59
Proceeds from investing excess cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-9	-31	-57	-88
Total	1,703	1,776	1,841	1,890	1,946	2,011	2,084	2,125	2,183	2,261	2,336	2,417
On-budget	1,382	1,445	1,498	1,540	1,586	1,641	1,703	1,733	1,780	1,845	1,903	1,966
Off-budget	321	330	343	350	360	370	381	392	403	416	432	451
Surplus	124	232	268	312	345	369	402	469	523	565	625	685
On-budget	1	84	102	126	143	154	169	222	260	288	332	377
Off-budget	124	149	165	186	202	215	232	247	263	278	293	307
Debt Held by the Public	3,633	3,409	3,158	2,854	2,522	2,165	1,774	1,315	1,081	989	887	830
Accumulated Excess Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	281	747	1,263	1,884
						As a Percentage of GDP						
Revenues												
Individual income	9.6	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.3	10.3
Corporate income	2.0	2.1	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6
Social insurance	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.6
Other	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Total	20.0	20.6	20.5	20.4	20.2	20.1	20.1	20.1	20.0	20.0	20.0	20.0
On-budget	15.2	15.7	15.5	15.4	15.3	15.2	15.1	15.1	15.1	15.1	15.1	15.1
Off-budget	4.9	4.9	4.9	5.0	5.0	4.9	5.0	4.9	4.9	4.9	4.9	4.9
Outlays												
Discretionary spending	6.3	6.2	6.2	6.1	6.0	5.9	5.8	5.6	5.5	5.4	5.3	5.2
Mandatory spending	10.7	10.5	10.4	10.4	10.5	10.7	10.9	10.8	10.9	11.1	11.3	11.4
Offsetting receipts	-0.9	-0.8	-0.8	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
Net interest	2.5	2.3	2.1	1.9	1.5	1.3	1.0	0.8	0.6	0.5	0.4	0.4
Proceeds from investing excess cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.1	-0.2	-0.4	-0.6
Total	18.7	18.2	17.9	17.5	17.2	17.0	16.8	16.4	16.1	16.0	15.8	15.6
On-budget	15.2	14.8	14.5	14.2	14.0	13.9	13.8	13.4	13.2	13.0	12.9	12.7
Off-budget	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9
Surplus	1.4	2.4	2.6	2.9	3.0	3.1	3.2	3.6	3.9	4.0	4.2	4.4
On-budget	*	0.9	1.0	1.2	1.3	1.3	1.4	1.7	1.9	2.0	2.2	2.4
Off-budget	1.4	1.5	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0
Debt Held by the Public	39.9	34.9	30.7	26.4	22.3	18.3	14.3	10.2	8.0	7.0	6.0	5.4
Accumulated Excess Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.1	5.3	8.5	12.2
Memorandum:												
Gross Domestic Product (Billions of dollars)	9,116	9,758	10,303	10,814	11,322	11,834	12,370	12,933	13,521	14,137	14,797	15,495

SOURCE: Congressional Budget Office.

NOTE: These numbers have been adjusted for advance appropriations. n.a. = not applicable; * = less than 0.05 percent of GDP.

Table 1-3.
CBO's Baseline Budget Projections, Assuming That Discretionary Spending Is Frozen at the Level Enacted for 2000 (By fiscal year)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
						In Billions of Dollars						
Revenues												
Individual income	879	997	1,055	1,107	1,155	1,202	1,256	1,313	1,375	1,444	1,519	1,601
Corporate income	185	201	201	192	193	198	206	215	222	229	235	241
Social insurance	612	650	692	729	761	789	828	864	901	938	982	1,027
Other	151	160	161	174	181	191	196	202	206	215	224	233
Total	1,827	2,008	2,109	2,202	2,290	2,380	2,486	2,594	2,706	2,826	2,960	3,102
On-budget	1,383	1,529	1,601	1,666	1,729	1,795	1,873	1,955	2,040	2,132	2,235	2,344
Off-budget	444	479	509	537	561	585	613	639	666	694	725	758
Outlays												
Discretionary spending	575	608	625	627	628	623	625	622	620	621	621	621
Mandatory spending	978	1,023	1,072	1,125	1,191	1,262	1,344	1,402	1,479	1,571	1,666	1,770
Offsetting receipts	-80	-80	-86	-93	-95	-95	-100	-105	-111	-116	-122	-129
Net interest	230	224	217	199	170	143	114	91	78	72	64	59
Proceeds from investing excess cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-9	-33	-66	-103	-147
Total	1,703	1,776	1,828	1,859	1,894	1,933	1,983	2,000	2,033	2,081	2,126	2,175
On-budget	1,382	1,445	1,485	1,509	1,535	1,564	1,603	1,609	1,630	1,666	1,695	1,725
Off-budget	321	330	343	350	359	369	380	391	403	415	431	449
Surplus	124	232	281	344	397	447	503	594	673	745	834	927
On-budget	1	84	116	157	195	231	270	346	410	466	541	618
Off-budget	124	149	166	187	202	216	233	248	263	279	294	309
Debt Held by the Public	3,633	3,409	3,145	2,809	2,425	1,991	1,499	1,185	1,081	989	887	830
Accumulated Excess Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	271	832	1,478	2,203	3,067
						As a Percentage of GDP						
Revenues												
Individual income	9.6	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.3	10.3
Corporate income	2.0	2.1	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6
Social insurance	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.6
Other	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Total	20.0	20.6	20.5	20.4	20.2	20.1	20.1	20.1	20.0	20.0	20.0	20.0
On-budget	15.2	15.7	15.5	15.4	15.3	15.2	15.1	15.1	15.1	15.1	15.1	15.1
Off-budget	4.9	4.9	4.9	5.0	5.0	4.9	5.0	4.9	4.9	4.9	4.9	4.9
Outlays												
Discretionary spending	6.3	6.2	6.1	5.8	5.5	5.3	5.1	4.8	4.6	4.4	4.2	4.0
Mandatory spending	10.7	10.5	10.4	10.4	10.5	10.7	10.9	10.8	10.9	11.1	11.3	11.4
Offsetting receipts	-0.9	-0.8	-0.8	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
Net interest	2.5	2.3	2.1	1.8	1.5	1.2	0.9	0.7	0.6	0.5	0.4	0.4
Proceeds from investing excess cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.1	-0.2	-0.5	-0.7	-0.9
Total	18.7	18.2	17.7	17.2	16.7	16.3	16.0	15.5	15.0	14.7	14.4	14.0
On-budget	15.2	14.8	14.4	14.0	13.6	13.2	13.0	12.4	12.1	11.8	11.5	11.1
Off-budget	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9
Surplus	1.4	2.4	2.7	3.2	3.5	3.8	4.1	4.6	5.0	5.3	5.6	6.0
On-budget	*	0.9	1.1	1.5	1.7	2.0	2.2	2.7	3.0	3.3	3.7	4.0
Off-budget	1.4	1.5	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0
Debt Held by the Public	39.9	34.9	30.5	26.0	21.4	16.8	12.1	9.2	8.0	7.0	6.0	5.4
Accumulated Excess Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.1	6.2	10.5	14.9	19.8
Memorandum:												
Gross Domestic Product (Billions of dollars)	9,116	9,758	10,303	10,814	11,322	11,834	12,370	12,933	13,521	14,137	14,797	15,495

SOURCE: Congressional Budget Office.

NOTE: These numbers have been adjusted for advance appropriations. n.a. = not applicable; * = less than 0.05 percent of GDP.

Table 1-4.
CBO's Baseline Budget Projections, Assuming That Discretionary Spending Equals CBO's Estimates of the Statutory Caps Through 2002 and Grows at the Rate of Inflation Thereafter (By fiscal year)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
						In Billions of Dollars						
Revenues												
Individual income	879	997	1,055	1,107	1,155	1,202	1,256	1,313	1,375	1,444	1,519	1,601
Corporate income	185	201	201	192	193	198	206	215	222	229	235	241
Social insurance	612	650	692	729	761	789	828	864	901	938	982	1,027
Other	151	160	161	174	181	191	196	202	206	215	224	233
Total	1,827	2,008	2,109	2,202	2,290	2,380	2,486	2,594	2,706	2,826	2,960	3,102
On-budget	1,383	1,529	1,601	1,666	1,729	1,795	1,873	1,955	2,040	2,132	2,235	2,344
Off-budget	444	479	509	537	561	585	613	639	666	694	725	758
Outlays												
Discretionary spending	575	608	579	571	587	602	617	633	648	665	681	698
Mandatory spending	978	1,023	1,072	1,125	1,191	1,262	1,344	1,402	1,479	1,571	1,666	1,770
Offsetting receipts	-80	-80	-86	-93	-95	-95	-100	-105	-111	-116	-122	-129
Net interest	230	224	215	194	161	133	102	86	78	72	64	59
Proceeds from investing excess cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-16	-44	-75	-110	-150
Total	1,703	1,776	1,780	1,797	1,844	1,902	1,964	1,999	2,050	2,115	2,179	2,249
On-budget	1,382	1,445	1,437	1,447	1,484	1,532	1,583	1,607	1,647	1,699	1,747	1,798
Off-budget	321	330	343	350	360	370	381	392	403	416	432	451
Surplus	124	232	329	405	446	478	522	595	655	711	781	853
On-budget	1	84	163	219	245	263	290	348	393	433	488	545
Off-budget	124	149	165	186	202	215	232	247	263	278	293	307
Debt Held by the Public	3,633	3,409	3,097	2,700	2,266	1,801	1,290	1,185	1,081	989	887	830
Accumulated Excess Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	481	1,024	1,636	2,308	3,098
						As a Percentage of GDP						
Revenues												
Individual income	9.6	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.3	10.3
Corporate income	2.0	2.1	1.9	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6
Social insurance	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.6
Other	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Total	20.0	20.6	20.5	20.4	20.2	20.1	20.1	20.1	20.0	20.0	20.0	20.0
On-budget	15.2	15.7	15.5	15.4	15.3	15.2	15.1	15.1	15.1	15.1	15.1	15.1
Off-budget	4.9	4.9	4.9	5.0	5.0	4.9	5.0	4.9	4.9	4.9	4.9	4.9
Outlays												
Discretionary spending	6.3	6.2	5.6	5.3	5.2	5.1	5.0	4.9	4.8	4.7	4.6	4.5
Mandatory spending	10.7	10.5	10.4	10.4	10.5	10.7	10.9	10.8	10.9	11.1	11.3	11.4
Offsetting receipts	-0.9	-0.8	-0.8	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
Net interest	2.5	2.3	2.1	1.8	1.4	1.1	0.8	0.7	0.6	0.5	0.4	0.4
Proceeds from investing excess cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.1	-0.3	-0.5	-0.7	-1.0
Total	18.7	18.2	17.3	16.6	16.3	16.1	15.9	15.5	15.2	15.0	14.7	14.5
On-budget	15.2	14.8	13.9	13.4	13.1	12.9	12.8	12.4	12.2	12.0	11.8	11.6
Off-budget	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9
Surplus	1.4	2.4	3.2	3.7	3.9	4.0	4.2	4.6	4.8	5.0	5.3	5.5
On-budget	*	0.9	1.6	2.0	2.2	2.2	2.3	2.7	2.9	3.1	3.3	3.5
Off-budget	1.4	1.5	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0
Debt Held by the Public	39.9	34.9	30.1	25.0	20.0	15.2	10.4	9.2	8.0	7.0	6.0	5.4
Accumulated Excess Cash	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.7	7.6	11.6	15.6	20.0
Memorandum:												
Gross Domestic Product (Billions of dollars)	9,116	9,758	10,303	10,814	11,322	11,834	12,370	12,933	13,521	14,137	14,797	15,495

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable; * = less than 0.05 percent of GDP.

Recent Changes to the Budget Outlook

CBO's projections of surpluses through 2010 have climbed substantially since April. Legislation enacted by the Congress and the President through June 15 slightly reduces projected revenues and increases projected spending in 2000 and each year thereafter, CBO estimates. But the effects of that legislation have been more than offset by changes to revenue and outlay estimates that have boosted projected surpluses. Most of the improvement in the budget outlook stems from the continuing strength of the economy, which leads to higher projected revenues. Lower projected levels of mandatory spending—including smaller net interest payments on the federal debt because of the larger surpluses—also contribute to the brighter picture.

As it periodically revises its baseline, CBO generally divides the revisions into three categories on the basis of their cause. Legislative revisions represent the budgetary effects of laws enacted since the previous projections. Economic revisions result from changes in the economic forecast that underpins the budget projections. Technical revisions are the "all other" category—typically, they result from information that has become available to analysts since the previous projections, such as spending so far for that year or changes in assumptions about the use of or eligibility for programs.

The categorization of revisions from baseline to baseline should be interpreted with caution. For example, legislative changes represent CBO's best estimate of the future effects of a law around the time it is enacted. If the new law proves to have different effects from those initially estimated, the differences will be reflected as technical reestimates in later revisions to the baseline. Distinguishing between economic and technical reestimates is similarly imprecise. Changes in some factors that are related to economic performance—such as the level of capital gains realizations or participation rates for various entitlement programs—are classified as technical reestimates because they are not driven directly by changes in the components of CBO's economic forecast. Despite such imperfections, tracking and classifying reestimates of revenues and spending as either legislative, economic, or technical is useful to budget analysts as they try to evaluate an improving (or worsening) budget outlook (see Box 1-1).

The current versions of CBO's baseline incorporate information about revenues and outlays through April—the first seven months of fiscal year 2000—from the Treasury Department's *Monthly Treasury Statement*, as well as data through June 15 from the *Daily Treasury Statement*. For all three variants of the baseline, revisions to revenues and mandatory programs (other than interest) are exactly the same. Differences among the three variants occur only in changes to projections of discretionary spending and net interest (see Tables 1-5 through 1-7).

Changes in projected revenues account for most of the improvement in the budgetary picture since April—and they largely result from the improved economic outlook. Outlay changes each year are much smaller.

Changes in Revenues

Higher-than-expected revenues through the middle of June, along with continued strong economic growth, boost CBO's estimate of revenues in 2000 to over $2 trillion, about $63 billion more than CBO estimated in April. Revenues are projected to rise to $3.1 trillion by 2010—an upward reestimate of $155 billion, the bulk of which is driven by changes in the economic forecast.

Legislative Revisions. Legislation enacted since April is expected to decrease revenues slightly over the next 10 years. The Trade and Development Act of 2000 will lower collections of customs duties by about $8 million in 2000, CBO estimates, and by larger amounts in later years.

Economic Revisions. Roughly $28 billion of the $63 billion revision to projected revenues in 2000 can be attributed to the stronger economy, which has affected all of the major sources of revenue. Projections of individual income taxes are up by about $10 billion,

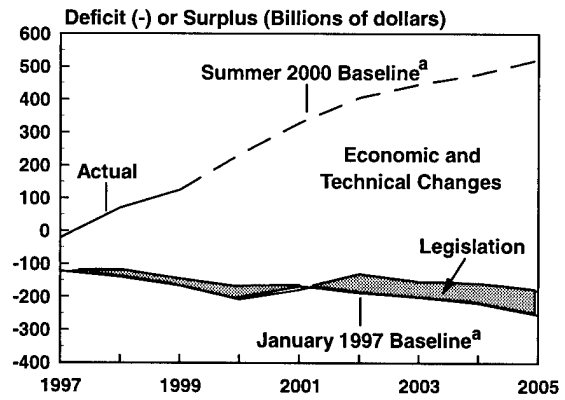
Box 1-1.
How Did the Budgetary Picture Become So Favorable?

The budget outlook has improved dramatically in recent years. The deficits that forecasters once anticipated for fiscal years 1998 and 1999 disappeared in a surge of revenues that created surpluses instead. Those surpluses are expected to continue growing in 2000 and beyond. The credit for that turnaround goes primarily to the strong performance of the economy; legislation enacted in the past few years has had only a minimal impact.

Back in January 1997, the Congressional Budget Office (CBO) projected deficits for the next several years, including a deficit of $171 billion for 2000 (see the figure below). Now, in the absence of additional legislative action, CBO is estimating a surplus of $232 billion for this year—an improvement of $404 billion. Changes in economic or technical factors more than accounted for that improvement, increasing the projected surplus for 2000 by an estimated $440 billion, whereas legislation decreased it by an estimated $37 billion. (That figure for legislation represents the sum of reestimates that CBO made each year on the basis of information available at the time. The actual effect of legislation may have been different but is still likely to have been small.) Projections for later years are similarly more optimistic now than in 1997 and are similarly dominated by changes of an economic or technical nature.

More than three-quarters of the improvement in the budget that occurred between 1998 and 2000, and a majority of the revisions to CBO's budget estimates through 2005, result from faster growth of revenues (rather than slower spending). Projected revenues for 2000 are now $303 billion more than estimated in 1997. The primary contributors to that unexpected growth stem from the strength of the economy and changes in characteristics of income. The types of income that are most important in determining tax revenues—primarily corporations' book profits and workers' wages and salaries—grew faster than the nation's gross domestic product and thus increased the share of total income that is taxable. Also, the average effective tax rate climbed because of a swift rise in income among people in the highest tax brackets. Finally, surges in stock prices and growth in stock market volume increased revenues from taxes on capital gains. Those three factors explain many of the recent changes to both actual revenues and the projections of revenues over the next few years.

Sources of Change in CBO's Baseline Projections Since 1997 (By fiscal year)



a. Assumes that discretionary spending equals CBO's estimates of the statutory caps while they are in effect and grows at the rate of inflation thereafter. The caps now extend through 2002; however, in January 1997, they were in effect only through 1998.

Projected outlays for 2000 are now $101 billion less than in the 1997 baseline. Differences between actual or currently projected spending and that baseline have a variety of sources. Nevertheless, some economic and technical factors stand out. Lower-than-expected inflation has caused lower spending to date on mandatory programs that are indexed to inflation and a consequent decrease in CBO's spending projections for those programs. In addition, outlays for Medicare benefits unexpectedly declined in 1999, so expectations for future spending on that program have lessened considerably. Moreover, the sizable improvement in the budget's bottom line has reduced outstanding debt held by the public and thus the government's interest payments on that debt.

In contrast to such economic and technical factors, legislation has played a small part in improving the budgetary picture—and has sometimes worsened it. The Balanced Budget Act of 1997 (BBA) cut spending by extending the caps on discretionary spending and instituting changes to rein in Medicare payments. But its companion law, the Taxpayer Relief Act of 1997, included provisions (such as the child tax credit and various education incentives) that diminished revenues at the same time. In addition, appropriation laws through 2000 enacted much higher discretionary spending than the BBA specified, as the Congress and the President made liberal use of emergency exemptions to the caps. In all, legislation has worsened the budget outlook for 1998 to 2001 relative to the 1997 projections. After 2001, legislative changes make a positive contribution, but largely as a result of the BBA. The ultimate impact of that legislation depends on compliance with the statutory caps for 2001 and 2002. Even in the unlikely event that those caps are met, the net effect of legislation would amount to less than 10 percent of the improved budget outlook each year.

Table 1-5.
Changes in Projected Surpluses Since April, Assuming That Discretionary Spending Grows at the Rate of Inflation After 2000 (By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total, 2001-2010
April Total Budget Surplus	179	181	212	231	250	273	330	374	404	449	495	3,199
Changes in Revenue Projections												
Legislative	*	-1	-1	-1	-1	-1	-1	-1	-1	*	*	-6
Economic	28	55	68	76	80	87	91	95	101	108	117	878
Technical	34	39	39	39	38	38	38	39	39	39	39	387
Total Revenue Changes	63	93	106	114	117	124	129	133	140	147	155	1,259
Changes in Outlay Projections												
Legislative												
Discretionary	0	0	0	0	0	0	0	0	0	0	0	0
Mandatory												
Social Security	4	4	4	3	3	2	1	1	*	*	-1	16
Agriculture programs	5	2	2	2	2	2	2	2	2	2	2	20
Debt service	*	1	1	2	2	2	3	3	3	4	4	25
Other	*	*	*	*	*	*	*	*	*	*	*	-1
Subtotal	10	7	6	6	6	6	6	6	6	6	6	61
Economic												
Discretionary	0	2	6	9	11	13	15	17	18	20	22	133
Mandatory												
Social Security	0	2	3	5	6	6	6	6	6	6	6	52
Other retirement programs[a]	0	*	1	1	1	1	1	2	2	2	2	13
Medicare	0	*	2	3	4	5	5	7	8	9	11	54
Net interest (Rate effects)[b]	2	6	8	2	1	2	2	1	*	*	*	22
Debt service[b]	*	-4	-7	-11	-14	-18	-22	-27	-32	-38	-44	-216
Other	-2	-3	-2	-2	-1	-1	*	-1	-1	-1	-1	-13
Subtotal	*	5	9	8	9	9	7	4	1	-2	-4	46
Technical												
Discretionary	5	0	0	0	0	0	*	*	*	*	0	0
Mandatory												
Social Security	-1	*	*	*	1	1	2	2	3	4	4	19
Medicare	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-4	-32
Net interest[b]	-2	*	-3	-3	-4	-5	-5	-5	-5	-5	-5	-40
Debt service[b]	*	-3	-6	-8	-11	-14	-17	-20	-24	-28	-31	-163
Other	*	*	*	*	1	1	1	1	1	1	1	6
Subtotal	*	-6	-11	-14	-16	-19	-22	-25	-28	-32	-36	-209
Total Outlay Changes	10	6	5	*	-1	-5	-10	-15	-22	-28	-34	-103
All Changes												
Total Impact on the Surplus	53	87	101	113	119	129	138	149	161	175	190	1,362
July Total Budget Surplus	232	268	312	345	369	402	469	523	565	625	685	4,561
Memorandum:												
Total Legislative Changes	-10	-8	-7	-7	-7	-7	-7	-6	-6	-6	-6	-66
Total Economic Changes	28	50	59	68	71	78	84	91	100	110	121	832
Total Technical Changes	34	45	49	52	54	57	61	64	67	71	75	596

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

a. Civil Service Retirement, Military Retirement, and Railroad Retirement.

b. Includes effect on proceeds from investing excess cash.

Table 1-6.
Changes in Projected Surpluses Since April, Assuming That Discretionary Spending Is Frozen at the Level Enacted for 2000 (By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total, 2001-2010
April Total Budget Surplus	179	192	237	273	315	358	436	502	558	629	704	4,204
Changes in Revenue Projections												
Legislative	*	-1	-1	-1	-1	-1	-1	-1	-1	*	*	-6
Economic	28	55	68	76	80	87	91	95	101	108	117	878
Technical	34	39	39	39	38	38	38	39	39	39	39	387
Total Revenue Changes	63	93	106	114	117	124	129	133	140	147	155	1,259
Changes in Outlay Projections												
Legislative												
Discretionary	0	0	0	0	0	0	0	0	0	0	0	0
Mandatory												
Social Security	4	4	4	3	3	2	1	1	*	*	-1	16
Agriculture programs	5	2	2	2	2	2	2	2	2	2	2	20
Debt service	*	1	1	2	2	2	3	3	3	4	4	25
Other	*	*	*	*	*	*	*	*	*	*	*	-1
Subtotal	10	7	6	6	6	6	6	6	6	6	6	61
Economic												
Discretionary	0	0	0	0	0	0	0	0	0	0	0	0
Mandatory												
Social Security	0	2	3	5	6	6	6	6	6	6	6	52
Other retirement programs[a]	0	*	1	1	1	1	1	2	2	2	2	13
Medicare	0	*	2	3	4	5	5	7	8	9	11	54
Net interest (Rate effects)[b]	2	6	8	2	1	2	2	1	*	*	*	22
Debt service[b]	*	-4	-8	-11	-15	-20	-25	-31	-37	-44	-52	-248
Other	-2	-3	-2	-2	-1	-1	*	-1	-1	-1	-1	-13
Subtotal	*	3	3	-2	-4	-7	-11	-17	-23	-29	-35	-120
Technical												
Discretionary	5	*	*	*	*	*	*	*	*	*	*	*
Mandatory												
Social Security	-1	*	*	*	1	1	2	2	3	4	4	19
Medicare	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-4	-32
Net interest[b]	-2	*	-3	-3	-4	-5	-5	-5	-5	-5	-5	-40
Debt service[b]	*	-4	-6	-9	-12	-15	-18	-22	-26	-30	-34	-175
Other	*	*	*	*	1	1	1	1	1	1	1	6
Subtotal	*	-6	-11	-14	-17	-20	-24	-27	-30	-34	-39	-222
Total Outlay Changes	10	4	-1	-10	-15	-21	-29	-38	-47	-57	-68	-282
All Changes												
Total Impact on the Surplus	53	89	107	124	132	145	158	171	187	205	223	1,540
July Total Budget Surplus	232	281	344	397	447	503	594	673	745	834	927	5,744
Memorandum:												
Total Legislative Changes	-10	-8	-7	-7	-7	-7	-7	-6	-6	-6	-6	-66
Total Economic Changes	28	52	65	78	84	93	102	112	124	137	152	998
Total Technical Changes	34	45	49	53	55	58	62	66	69	74	78	609

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

a. Civil Service Retirement, Military Retirement, and Railroad Retirement.

b. Includes effect on proceeds from investing excess cash.

Table 1-7.
Changes in Projected Surpluses Since April, Assuming That Discretionary Spending Equals CBO's Estimates of the Statutory Caps Through 2002 and Grows at the Rate of Inflation Thereafter (By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total, 2001-2010
April Total Budget Surplus	179	239	297	324	348	379	440	487	527	580	634	4,255
Changes in Revenue Projections												
Legislative	*	-1	-1	-1	-1	-1	-1	-1	-1	*	*	-6
Economic	28	55	68	76	80	87	91	95	101	108	117	878
Technical	34	39	39	39	38	38	38	39	39	39	39	387
Total Revenue Changes	63	93	106	114	117	124	129	133	140	147	155	1,259
Changes in Outlay Projections												
Legislative												
Discretionary	0	0	0	0	0	0	0	0	0	0	0	0
Mandatory												
Social Security	4	4	4	3	3	2	1	1	*	*	-1	16
Agriculture programs	5	2	2	2	2	2	2	2	2	2	2	20
Debt service	*	1	1	2	2	2	3	3	3	4	4	25
Other	*	*	*	*	*	*	*	*	*	*	*	-1
Subtotal	10	7	6	6	6	6	6	6	6	6	6	61
Economic												
Discretionary	0	0	0	2	2	2	2	3	3	3	3	19
Mandatory												
Social Security	0	2	3	5	6	6	6	6	6	6	6	52
Other retirement programs[a]	0	*	1	1	1	1	1	2	2	2	2	13
Medicare	0	*	2	3	4	5	5	7	8	9	11	54
Net interest (Rate effects)[b]	2	6	8	2	1	2	2	1	*	*	*	22
Debt service[b]	*	-4	-8	-11	-15	-20	-25	-30	-36	-43	-51	-244
Other	-2	-3	-2	-2	-1	-1	*	-1	-1	-1	-1	-13
Subtotal	*	3	3	*	-1	-4	-8	-13	-19	-25	-31	-96
Technical												
Discretionary	5	0	0	0	0	0	0	0	0	0	0	0
Mandatory												
Social Security	-1	*	*	*	1	1	2	2	3	4	4	19
Medicare	-2	-2	-2	-3	-3	-3	-3	-3	-4	-4	-4	-32
Net interest[b]	-2	*	-3	-3	-4	-5	-5	-5	-5	-5	-5	-40
Debt service[b]	*	-4	-8	-10	-12	-15	-19	-22	-26	-30	-34	-179
Other	*	*	*	*	1	1	1	1	1	1	1	6
Subtotal	*	-7	-12	-15	-18	-21	-24	-27	-30	-34	-38	-225
Total Outlay Changes	10	3	-2	-9	-13	-19	-26	-35	-44	-54	-63	-261
All Changes												
Total Impact on the Surplus	53	90	108	123	130	143	155	168	183	201	219	1,520
July Total Budget Surplus	232	329	405	446	478	522	595	655	711	781	853	5,774
Memorandum:												
Total Legislative Changes	-10	-8	-7	-7	-7	-7	-7	-6	-6	-6	-6	-66
Total Economic Changes	28	52	65	76	81	91	99	109	121	133	148	974
Total Technical Changes	34	45	51	54	56	59	62	66	69	74	77	612

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

a. Civil Service Retirement, Military Retirement, and Railroad Retirement.

b. Includes effect on proceeds from investing excess cash.

corporate income taxes by about $14 billion, and social insurance payroll taxes (primarily for Medicare) by $4 billion. Those increases from CBO's previous baseline are primarily driven by higher-than-expected levels of wage and salary income, which boost receipts from individual income and social insurance taxes, and by higher corporate profits, which increase receipts from corporate income taxes. The revision in the economic outlook accounts for most of the rise in projected revenues (compared with the April baseline) throughout the decade.

Technical Revisions. The rest of the increase since April in projected revenues for 2000—more than $34 billion—is attributable to technical changes. Technical increases to individual income tax receipts amount to more than $40 billion, slightly offset by lower estimates of social insurance and corporate income tax revenues. (Detailed information about the types of income generating the revenues from tax year 1999 will not be available until later this year, and corresponding information for tax year 2000 will not be available until a year after that.)

In recent years, similar technical revisions to revenues have ultimately been explained by a number of factors: higher-than-expected receipts from taxes on individuals' capital gains; disproportionately strong growth in income among higher-income taxpayers, who face the highest marginal tax rates; and rising estimates of aggregate income in the national income and product accounts (which are often updated after baseline revenue projections have been completed). Some combination of those factors might well be responsible for the current unexplained revenues. But lacking detailed information about their source, CBO has extended its technical revisions to projected revenues through 2010 at about the same level as in 2000.

Changes in Discretionary Spending

Discretionary spending consists of programs whose spending levels are determined annually through the appropriation process. Although no legislation that affects discretionary spending was enacted from April through mid-June, both economic and technical reestimates have affected CBO's projections of discretionary spending.

Economic Revisions. CBO's projections of various measures of inflation—such as the GDP deflator and the employment cost index for wages and salaries—are higher now than in the previous economic outlook. As a result, in the inflated version of the baseline, which is calculated using such measures, discretionary spending is roughly $2 billion higher for 2001 and $22 billion higher for 2010 than CBO projected in April. Discretionary spending in the freeze version of the baseline is not affected by assumptions about inflation rates, and in the capped version it is affected only slightly (after 2002, when discretionary spending will no longer be subject to statutory caps and is assumed to rise with inflation).

Technical Revisions. CBO made technical adjustments to its projections of discretionary spending only for the current fiscal year. Those adjustments, which increase projected spending in 2000 by $5 billion, mainly reflect observed spending to date. Although the revisions affect nearly all budget functions, by far the largest deals with spending for defense, which has been higher than anticipated so far this year.

Changes in Mandatory Spending

Mandatory spending, also known as direct spending, involves programs whose spending requirements are defined in authorization laws and are not normally subject to the yearly appropriation process.

Legislative Revisions. Two major pieces of legislation enacted since April will affect mandatory spending in 2000 and beyond. The first, the Agricultural Risk Protection Act of 2000, provides an additional $5.5 billion in 2000 and $1.5 billion in 2001 for income assistance to agricultural producers. The act also amends the Federal Crop Insurance Act to make it cheaper for producers to buy crop insurance and to increase participation in the insurance program. Those changes are estimated to cost $0.7 billion in 2001, rising through the decade to $2.5 billion in 2010. (In addition, the act makes relatively small changes to Medicaid, the State Children's Health Insurance Program, and several nutrition programs.)

Second, the Senior Citizens Freedom to Work Act of 2000 repeals the earnings test that reduces So-

cial Security benefits for some people between the program's normal retirement age (currently 65) and 69. For those beneficiaries, a dollar of benefits had been withheld for every three dollars of earnings above a certain threshold. Under the new law, those people will be able to draw their full Social Security benefits regardless of their earnings. CBO originally estimated that the law will increase spending by $3.9 billion in 2000 and $20 billion through 2010, although it now appears that spending in 2000 will be somewhat lower. Both the Social Security benefit payments and a small amount of associated administrative costs are off-budget, accounting for virtually all of the $4 billion decrease since April in CBO's estimate of the off-budget surplus for 2000.

Although projections of outstanding debt have declined since April because of projected increases in the surplus, that decline is not as large as it would have been in the absence of recent legislation. CBO estimates that legislative changes will boost debt-service costs by a total of $25 billion over the 2001-2010 period compared with the April projections.

Economic Revisions. Changes in CBO's economic forecast include increases in the rate of inflation, reductions in the unemployment rate, and higher interest rates through 2002. Those changes drive reestimates for many mandatory programs—particularly Social Security and Medicare, the two largest entitlement programs.

Higher projected inflation increases the annual cost-of-living adjustment given to Social Security recipients by an estimated $2 billion in 2001 and around $6 billion by 2004. Estimates for other income-security programs that include mandated cost-of-living adjustments—such as retirement programs for railroad workers, government employees, and the military; Supplemental Security Income; and veterans' compensation—are similarly affected by CBO's revised forecast for inflation. Higher inflation also pushes up the costs of health care services, and thus of Medicare, by $0.4 billion in 2001 and $11 billion in 2010.

Just as higher projected inflation increases projected spending, a decline in the projected unemployment rate lowers it. CBO has reduced its projection of federal spending for unemployment benefits by nearly $1 billion for 2000 and a total of almost $6 billion between 2001 and 2004 as a direct result of the drop in projected unemployment.

CBO now estimates that the interest rate on three-month Treasury bills will average 6.6 percent in 2001, a full percentage point higher than its previous forecast. The rate on 10-year Treasury notes is expected to average 6.8 percent next year, nearly half a percentage point higher. Those increases boost the government's projected interest costs by $6 billion in 2001, nearly $8 billion in 2002, and smaller amounts thereafter. By 2004, CBO's projections for interest rates return to a lower long-term level: 4.8 percent for three-month bills and 5.7 percent for 10-year notes.

Although most of the economic changes to outlay projections increase spending and thus reduce the projected surplus, economic changes that increase revenues are substantially larger. As a result, the overall effect of economic revisions is to boost the projected surplus. For that reason, changes in debt-service costs that are classified as economic reduce the projected amount of interest paid (or increase projected earnings on excess cash) each year through 2010. The resulting annual savings reach $44 billion in 2010 under the inflated variation of the baseline.

Technical Revisions. Technical adjustments to projections of mandatory spending incorporate new information about the operation of mandatory programs, particularly actual outlays through April. In some cases, the revisions affect only this year; in others, the new information necessitates reestimating program spending through the decade.

The bulk of the technical changes to projections of mandatory outlays represent reductions in debt-service costs, largely because of higher revenue estimates. Overall, those technical revisions lower cumulative debt-service costs by $163 billion between 2001 and 2010 in the inflated variation of the baseline.

Other technical reestimates of mandatory spending are small. Besides the higher cost-of-living adjustments described above, a number of other factors affect the growth of Social Security outlays after 2000. For example, because the growth of real (inflation-adjusted) wages is now expected to be higher, benefits for future retirees are projected to be greater than pre-

viously estimated. That effect boosts Social Security spending by as much as $4 billion a year compared with the April projections.

Spending for the Medicare program was lower than anticipated through the first two-thirds of this year, so CBO has reduced its estimate of such spending by $2 billion for 2000 and similar amounts for subsequent years. That reestimate reflects a slowdown in Medicare beneficiaries' use of services, particularly home health care. Through the decade, that reestimate partially offsets the larger increases in Medicare outlays resulting from higher projected inflation that are included in the economic revisions.

Several other technical revisions to mandatory spending deserve mention. Higher-than-expected realizations from asset sales in both the Federal Savings and Loan Insurance Corporation Resolution Fund and the Bank Insurance Fund are expected to offset spending in 2000 by an additional $1.1 billion. In addition, participation rates for the Food Stamp program are estimated to be lower in the near term, resulting in lower outlays for that program. Finally, an expected revision by the Department of Education to its estimate of the subsidy costs of previously issued student loans—as well as year-to-date outlays associated with such loans—has prompted CBO to reestimate its baseline for that program. In total, the reestimate reduces projected spending by the Department of Education in 2000 by $1.9 billion.

Projections of Revenues and Spending Through 2010

CBO projects that revenues will reach a post-World War II high of 20.6 percent of GDP this year. Barring any changes in policy, revenues are expected to fall slowly to a level of 20.0 percent of GDP by 2007, where they will remain through 2010 (see Tables 1-2 through 1-4).

Individual income tax receipts—bolstered primarily by high capital gains realizations and increases in the effective tax rate—have been the main source of the rapid growth in revenues as a percentage of GDP that has occurred in recent years. (Total revenues have grown from 18.5 percent of GDP in 1995 to the projected level of 20.6 percent this year). Sharp rises in stock prices help explain the higher realizations of capital gains. And strong growth in real income, along with especially rapid growth in income among high-income taxpayers, who are taxed at the highest marginal rates, has boosted the effective tax rate.

CBO expects total revenues to grow by 9.9 percent this year, but it does not expect them to continue increasing more rapidly than the overall growth of GDP for much longer. Between 2001 and 2010, revenues will grow at an average rate of 4.4 percent a year, CBO projects, compared with an average rate of 4.7 percent for nominal GDP.

On the other side of the ledger, total outlays are expected to rise more slowly than revenues. Mandatory spending in CBO's baseline grows by an average of 6 percent a year, but discretionary spending grows by less than 3 percent a year in the inflated variation of the baseline (and by less in the other two variations), and interest costs decline as debt is paid off. As a result, total outlays rise by an average of 3.1 percent annually between 2001 and 2010 in the inflated variation of the baseline. (The corresponding averages would be 1.9 percent for the freeze variation and 2.6 percent for the capped variation.) As a share of GDP, outlays are projected to decline from 18.2 percent of GDP this year to between 14.0 percent and 15.6 percent of GDP in 2010, depending on the assumptions made about discretionary spending.

Those different assumptions generate significantly different outcomes for both the amount of discretionary spending and its share of total outlays (see Table 1-8). Discretionary outlays from 2001 through 2010 are more than $965 billion higher in the inflated variation of the baseline than in the freeze variation and about $920 billion higher than in the capped variation. Likewise, discretionary spending continues to make up roughly one-third of total outlays in the inflated variation, whereas it falls to less than 30 percent of total outlays in the freeze variation. (As recently as 1991, discretionary spending accounted for 40 percent of total outlays.)

Entitlements and other mandatory programs will remain by far the largest spending category in the budget, with outlays expected to total more than $1 trillion this year and to grow rapidly through 2010 (see Table 1-9). That growth is fueled by spending for Social Security, Medicare, and Medicaid, which together account for slightly more than three-quarters of all mandatory outlays.

Interest costs now make up a sizable portion of the federal budget. But under CBO's baseline projections of rapidly rising surpluses through 2010, outstanding government debt will decline sharply over that period. Therefore, despite a projected increase in interest rates in the near term, annual interest payments on the debt will fall quickly from their 1999 level of $230 billion (see Table 1-10).

The path of interest costs depends on the size and composition of the federal debt. If surpluses accrue as projected, much of the current debt will be paid down over the next several years; however, a part of it—including some long-term bonds and savings bonds—will not be available for redemption during CBO's 10-

Table 1-8.
CBO's Projections of Discretionary Spending Under Alternative Versions of the Baseline
(By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discretionary Spending Grows at the Rate of Inflation After 2000[a]											
Budget Authority											
Defense	290	300	309	318	327	335	344	353	362	372	381
Nondefense	280	310	320	330	339	348	357	366	376	386	396
Total	570	611	629	648	666	683	701	719	738	757	777
Outlays											
Defense	288	297	304	313	322	333	339	345	357	366	376
Nondefense	320	340	352	363	371	380	390	399	408	418	429
Total	608	638	656	676	693	713	728	744	765	785	804
Discretionary Spending Is Frozen at the Level Enacted for 2000[a]											
Budget Authority											
Defense	290	290	290	290	290	290	290	290	290	290	290
Nondefense	280	296	296	296	296	296	296	296	296	296	296
Total	570	586	586	586	586	586	586	586	586	586	586
Outlays											
Defense	288	290	288	289	289	291	289	287	289	289	289
Nondefense	320	335	339	339	334	334	333	333	332	332	332
Total	608	625	627	628	623	625	622	620	621	621	621
Discretionary Spending Equals CBO's Estimates of the Statutory Caps Through 2002 and Grows at the Rate of Inflation Thereafter[b]											
Budget Authority	570	541	550	566	580	595	610	625	641	657	673
Outlays	608	579	571	587	602	617	633	648	665	681	698

SOURCE: Congressional Budget Office.

a. After adjustment for advance appropriations.

b. The current statutory caps do not divide discretionary spending into defense and nondefense costs.

Table 1-9.
CBO's Projections of Mandatory Spending (By fiscal year, in billions of dollars)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Means-Tested Programs												
Medicaid	108	115	124	134	145	158	172	188	204	223	243	264
State Children's Health Insurance Program	1	2	3	3	3	4	4	4	4	4	4	5
Food Stamps	19	18	19	19	20	21	22	23	23	24	25	26
Supplemental Security Income	28	29	30	32	34	36	41	40	39	44	47	49
Family Support[a]	20	21	23	24	24	24	25	25	26	26	26	27
Veterans' Pensions	3	3	3	3	4	4	4	4	3	4	4	4
Child Nutrition	9	9	9	10	10	11	11	12	12	13	13	14
Earned Income and Child Tax Credits	26	27	26	27	27	28	28	29	29	30	30	30
Student Loans	3	4	5	6	5	5	5	5	5	5	5	5
Foster Care	5	6	6	6	7	7	8	8	9	9	10	11
Total	221	233	249	265	280	298	320	337	355	382	407	435
Non-Means-Tested Programs												
Social Security	387	405	426	447	469	492	516	541	568	597	630	667
Medicare	209	216	234	243	265	285	312	323	353	379	409	441
Subtotal	596	621	660	690	734	777	828	864	921	976	1,039	1,108
Other Retirement and Disability												
Federal civilian[b]	49	51	53	56	58	61	64	67	70	73	76	80
Military	32	33	34	35	36	37	38	39	41	42	43	44
Other	5	5	5	5	5	5	5	5	5	5	5	5
Subtotal	85	88	92	95	99	103	107	111	115	120	124	129
Unemployment Compensation	21	21	20	22	26	29	31	34	36	38	39	41
Other Programs												
Veterans' benefits[c]	22	22	23	24	26	26	29	28	27	29	30	30
Commodity Credit Corporation Fund	18	29	12	11	9	9	7	6	5	5	5	5
Social services	5	4	5	5	5	5	5	5	5	5	5	5
Credit liquidating accounts	-12	-12	-10	-9	-10	-11	-11	-11	-11	-11	-11	-10
Universal Service Fund	3	4	5	5	6	11	12	12	12	12	12	12
Other	19	12	15	17	17	16	15	16	15	15	16	16
Subtotal	55	60	50	53	52	56	58	56	52	55	57	58
Total	758	790	823	861	911	964	1,024	1,065	1,124	1,189	1,259	1,336
Total												
All Mandatory Spending	978	1,023	1,072	1,125	1,191	1,262	1,344	1,402	1,479	1,571	1,666	1,770

SOURCE: Congressional Budget Office.

NOTE: Spending for the benefit programs shown above generally excludes administrative costs, which are discretionary. Spending for Medicare also excludes premiums, which are considered offsetting receipts.

a. Includes Temporary Assistance for Needy Families, Family Support, Child Care Entitlements to States, and Children's Research and Technical Assistance.

b. Includes Civil Service, Foreign Service, Coast Guard, and other retirement programs and annuitants' health benefits.

c. Includes veterans' compensation, readjustment benefits, life insurance, and housing programs.

Table 1-10.
CBO's Projections of Federal Interest Outlays Under Alternative Versions of the Baseline
(By fiscal year, in billions of dollars)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discretionary Spending Grows at the Rate of Inflation After 2000[a]												
Interest on Public Debt (Gross interest)[b]	354	364	371	372	358	349	340	330	328	337	350	365
Interest Received by Trust Funds												
Social Security	-52	-60	-69	-81	-92	-103	-115	-127	-141	-155	-171	-187
Other trust funds[c]	-67	-71	-76	-82	-84	-87	-90	-94	-98	-101	-105	-110
Subtotal	-119	-131	-145	-162	-176	-190	-205	-221	-238	-257	-276	-297
Other Interest[d]	-5	-9	-8	-8	-7	-8	-8	-9	-9	-9	-9	-9
Total (Net interest)	230	224	218	201	174	151	126	101	81	72	64	59
Discretionary Spending Is Frozen at the Level Enacted for 2000[a]												
Interest on Public Debt (Gross interest)[b]	354	364	370	370	353	341	327	320	325	337	350	365
Interest Received by Trust Funds												
Social Security	-52	-60	-69	-81	-92	-103	-115	-127	-141	-155	-171	-187
Other trust funds[c]	-67	-71	-76	-82	-84	-87	-90	-94	-98	-101	-105	-110
Subtotal	-119	-131	-145	-162	-176	-190	-205	-221	-238	-257	-276	-297
Other Interest[d]	-5	-9	-8	-8	-7	-8	-8	-9	-9	-9	-9	-9
Total (Net interest)	230	224	217	199	170	143	114	91	78	72	64	59
Discretionary Spending Equals CBO's Estimates of the Caps Through 2002 and Grows at the Rate of Inflation Thereafter												
Interest on Public Debt (Gross interest)[b]	354	364	368	364	345	330	316	316	325	337	350	365
Interest Received by Trust Funds												
Social Security	-52	-60	-69	-81	-92	-103	-115	-127	-141	-155	-171	-187
Other trust funds[c]	-67	-71	-76	-82	-84	-87	-90	-94	-98	-101	-105	-110
Subtotal	-119	-131	-145	-162	-176	-190	-205	-221	-238	-257	-276	-297
Other Interest[d]	-5	-9	-8	-8	-7	-8	-8	-9	-9	-9	-9	-9
Total (Net interest)	230	224	215	194	161	133	102	86	78	72	64	59

SOURCE: Congressional Budget Office.

NOTE: Because proceeds from investing excess cash are not considered part of net interest, they are not shown in this table.

a. After adjustment for advance appropriations.

b. Excludes interest costs of debt issued by agencies other than the Treasury (primarily the Tennessee Valley Authority).

c. Mainly Civil Service Retirement, Military Retirement, Medicare, unemployment insurance, and the Airport and Airway Trust Fund.

d. Primarily interest on loans to the public.

Table 1-11.
CBO's Projections of Federal Debt at the End of the Year Under Alternative Versions of the Baseline
(By fiscal year, in billions of dollars)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discretionary Spending Grows at the Rate of Inflation After 2000[a]												
Debt Held by the Public	3,633	3,409	3,158	2,854	2,522	2,165	1,774	1,315	1,081	989	887	830
Debt Held by Government Accounts												
Social Security	855	1,005	1,171	1,358	1,560	1,775	2,007	2,254	2,517	2,795	3,087	3,394
Other government accounts[b]	1,118	1,202	1,287	1,384	1,481	1,573	1,662	1,762	1,858	1,954	2,050	2,145
Subtotal	1,973	2,207	2,458	2,742	3,041	3,348	3,670	4,016	4,375	4,748	5,137	5,540
Gross Federal Debt	5,606	5,617	5,616	5,596	5,563	5,513	5,444	5,331	5,456	5,737	6,024	6,370
Debt Subject to Limit[c]	5,568	5,579	5,579	5,559	5,531	5,487	5,424	5,311	5,438	5,719	6,006	6,352
Accumulated Excess Cash Greater Than Debt Available for Redemption	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	281	747	1,263	1,884
Net Indebtedness[d]	3,633	3,409	3,158	2,854	2,522	2,165	1,774	1,315	800	242	-376	-1,054
Memorandum:												
Debt Held by the Public as a Percentage of GDP	39.9	34.9	30.7	26.4	22.3	18.3	14.3	10.2	8.0	7.0	6.0	5.4
Discretionary Spending Is Frozen at the Level Enacted for 2000[a]												
Debt Held by the Public	3,633	3,409	3,145	2,809	2,425	1,991	1,499	1,185	1,081	999	887	830
Debt Held by Government Accounts												
Social Security	855	1,005	1,171	1,358	1,560	1,775	2,007	2,254	2,517	2,795	3,087	3,394
Other government accounts[b]	1,118	1,202	1,287	1,384	1,481	1,573	1,662	1,762	1,858	1,954	2,050	2,145
Subtotal	1,973	2,207	2,458	2,742	3,041	3,348	3,670	4,016	4,375	4,748	5,137	5,540
Gross Federal Debt	5,606	5,617	5,603	5,551	5,466	5,339	5,168	5,201	5,456	5,737	6,024	6,370
Debt Subject to Limit[c]	5,568	5,579	5,566	5,514	5,435	5,313	5,148	5,182	5,438	5,719	6,006	6,352
Accumulated Excess Cash Greater Than Debt Available for Redemption	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	271	832	1,478	2,203	3,067
Net Indebtedness[d]	3,633	3,409	3,145	2,809	2,425	1,991	1,499	914	249	-489	-1,316	-2,237
Memorandum:												
Debt Held by the Public as a Percentage of GDP	39.9	34.9	30.5	26.0	21.4	16.8	12.1	9.2	8.0	7.0	6.0	5.4

(Continued)

Table 1-11.
Continued

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Discretionary Spending Equals CBO's Estimates of the Statutory Caps Through 2002 and Grows at the Rate of Inflation Thereafter												
Debt Held by the Public	3,633	3,409	3,097	2,700	2,266	1,801	1,290	1,185	1,081	989	887	830
Debt Held by Government Accounts												
Social Security	855	1,005	1,171	1,358	1,560	1,775	2,007	2,254	2,517	2,795	3,087	3,394
Other government accounts[b]	1,118	1,202	1,287	1,384	1,481	1,573	1,662	1,762	1,858	1,954	2,050	2,145
Subtotal	1,973	2,207	2,458	2,742	3,041	3,348	3,670	4,016	4,375	4,748	5,137	5,540
Gross Federal Debt	5,606	5,617	5,555	5,442	5,307	5,149	4,959	5,201	5,456	5,737	6,024	6,370
Debt Subject to Limit[c]	5,568	5,579	5,518	5,405	5,276	5,123	4,939	5,182	5,438	5,719	6,006	6,352
Accumulated Excess Cash Greater Than Debt Available for Redemption	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	481	1,024	1,636	2,308	3,098
Net Indebtedness[d]	3,633	3,409	3,097	2,700	2,266	1,801	1,290	704	57	-647	-1,421	-2,268
Memorandum:												
Debt Held by the Public as a Percentage of GDP	39.9	34.9	30.1	25.0	20.0	15.2	10.4	9.2	8.0	7.0	6.0	5.4

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. After adjustment for advance appropriations.

b. Mainly Civil Service Retirement, Military Retirement, Medicare, unemployment insurance, and the Airport and Airway Trust Fund.

c. Differs from gross federal debt primarily because most debt issued by agencies other than the Treasury is excluded from the debt limit. The current debt limit is $5,950 billion.

d. Debt held by the public minus excess cash.

year projection period. Therefore, in any given year, some debt will remain outstanding and incur interest costs, regardless of the size of the surplus. That minimum level of outstanding debt will decline each year, CBO estimates, eventually falling to $830 billion by 2010 (see Table 1-11). Once the minimum is reached, the baseline accounts for any excess cash from the surplus separately and does not consider the proceeds generated by investing that cash as part of net interest. Under CBO's current budget outlook, by 2007 each version of the baseline will be at the estimated minimum level of debt for the entire year and will therefore have identical net interest costs.

By 2008, accumulated excess cash will outstrip remaining debt held by the public in both the freeze and capped variations. In other words, if all of the outstanding debt were available for redemption, it could be paid off by then. Even in the inflated variation of the baseline, accumulated cash is projected to exceed debt held by the public in 2009.

Table 1-12.
Trust Fund Surpluses (By fiscal year, in billions of dollars)

Trust Fund	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Social Security	125	150	166	187	202	215	232	247	263	278	293	307
Medicare												
Hospital Insurance (Part A)	22	25	32	40	40	40	37	42	37	34	31	27
Supplementary Medical Insurance (Part B)	5	1	-7	-3	-2	-3	-4	-1	-1	-1	-1	-1
Subtotal	26	26	26	37	38	36	33	41	36	34	30	26
Military Retirement	7	7	8	8	9	10	10	11	12	12	13	14
Civilian Retirement[a]	31	31	32	33	33	33	33	34	34	34	34	35
Unemployment	7	9	9	8	6	1	*	*	-1	-2	*	1
Highway and Mass Transit	10	4	3	3	3	4	4	4	5	6	6	7
Airport and Airway	3	1	1	1	1	2	2	3	3	4	5	6
Other[b]	3	3	4	3	3	3	3	3	3	3	3	3
Total Trust Fund Surplus[c]	213	233	248	281	296	303	318	343	355	370	385	399
Federal Funds Deficit (-) or Surplus[c]	-88	-1	20	32	49	66	83	126	167	196	240	286
Total Budget Surplus[c]	124	232	268	312	345	369	402	469	523	565	625	685
Memorandum:												
Net Transfers from the General Fund to Trust Funds	275	290	305	336	363	387	416	443	477	510	545	583

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

a. Civil Service Retirement, foreign service retirement, and several small funds.

b. Primarily Railroad Retirement, employees' health and life insurance, Hazardous Substance Superfund, and various veterans' insurance trust funds.

c. Assumes that discretionary spending grows at the rate of inflation after adjustment for advance appropriations. The total surplus would be greater under the capped version of the baseline (which assumes that discretionary spending equals CBO's estimates of the statutory caps through 2002 and grows at the rate of inflation thereafter) or the freeze version (which assumes that discretionary spending is frozen at the level enacted for 2000).

CBO's current estimates of surpluses in federal trust funds are similar to those published in January.[2] The Social Security trust funds continue to account for well over half of all trust fund surpluses: $150 billion this year out of a total of $233 billion (see Table 1-12). (Social Security taxes are projected to exceed benefit payments and administrative costs by $90 billion in 2000; the remainder of the Social Security surplus results from transfers from the general fund for interest payments.) By 2010, the Social Security surplus is projected to total $307 billion, but it will begin to shrink soon afterward as large numbers of baby boomers start to retire. The Hospital Insurance Trust Fund is currently running a surplus of about $25 billion. That figure is projected to increase to $42 billion in 2006 but decline in the later years of the decade.

2. See Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2001-2010* (January 2000).

Comparison with the Administration's Current-Services Projections

On June 26, the Administration issued its *Mid-Session Review* of the 2001 budget. The "current-services" projections in that report are analogous to the inflated version of CBO's baseline. Both conclude that the surplus will climb steadily through 2010—if revenues and mandatory spending continue to be governed by current laws and if discretionary appropriations keep pace with inflation.

The 10-year surplus that CBO projects for 2001 through 2010 in the inflated version of its baseline is $368 billion larger than the cumulative surplus estimated by the Administration's Office of Management and Budget (OMB). About $300 billion of that difference appears in on-budget accounts and $67 billion in off-budget accounts. Although a discrepancy of $368 billion may seem large, it results from differences of just 1.0 percent in total revenues projected for the period and 0.5 percent in total projected outlays. In most years, the two estimates of the surplus differ by $30 billion to $50 billion, which is well within the range of uncertainty that surrounds such projections (see Table 1-13).

More than two-thirds of the difference ($259 billion) between CBO's and the Administration's projections of the 10-year surplus results from differences in revenue projections. CBO's projections are higher for most of the 2001-2010 period—as much as $44 billion higher in 2003. Those differences are largely a result of CBO's somewhat higher projection of the effective tax rate on individual income. In later years, however, the Administration's slightly larger projection of the tax base (composed mainly of wages and salaries plus corporate profits) offsets CBO's higher effective tax rates, so that by the end of the decade, the two projections of total revenues are virtually the same.

On the spending side of the budget, the differences are even smaller than those involving revenues. In all, CBO estimates that outlays will be $109 billion lower over the 2001-2010 period than OMB does. CBO's projection of discretionary spending is higher than OMB's over the 10-year period but is offset by lower estimates of spending on mandatory programs and net interest.

Discretionary spending under the inflated variation of CBO's baseline exceeds the Administration's estimates by amounts that rise gradually from $3 billion in 2001 to $19 billion in 2010. Those differences can be explained mostly by variations in the factors used to inflate budget authority into the future (the GDP deflator and the employment cost index for wages and salaries). Such factors are slightly higher in CBO's view than in the Administration's and therefore generate marginally higher annual outlays.

In every year from 2001 through 2010, the Administration projects higher levels of mandatory outlays than CBO does. That gap ranges from just $4 billion in 2004 to about $20 billion in 2008 through 2010. Most of that difference lies in benefit programs. By 2010, CBO's projections of mandatory spending for health (chiefly Medicare and Medicaid) are $27 billion greater than OMB's, but that divergence is overshadowed by CBO's judgment that spending in other areas—education, income security, Social Security, and veterans' benefits—will be $48 billion lower than OMB projects. The bulk of those differences stem from technical factors (chiefly, assumptions about caseloads and about increases in average benefits), not from contrasting economic assumptions. For example, CBO projects that the average benefit for disabled workers who get Social Security will climb just 0.4 percent a year faster than the rate of inflation—its average growth for the past five years—whereas the Administration assumes that the growth will be about three times greater.[3]

Differences in projections of net interest (including the proceeds from investing excess cash) can result from differences in interest rates, differences in assumed levels of debt, or other, technical factors. Through mid-2002, the interest rates in CBO's economic forecast are higher than those of OMB, which leads to higher estimates of net interest. However, throughout the 10-year period, CBO projects greater

3. That and many other differences persist from the projections that CBO and OMB published earlier this year. For more details, see Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2001*.

Table 1-13.
Comparison of CBO's Inflated Variation of the Baseline with OMB's Current-Services Baseline
(By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CBO's July 2000 Inflated Variation											
Revenues	2,008	2,109	2,202	2,290	2,380	2,486	2,594	2,706	2,826	2,960	3,102
On-budget	1,529	1,601	1,666	1,729	1,795	1,873	1,955	2,040	2,132	2,235	2,344
Off-budget	479	509	537	561	585	613	639	666	694	725	758
Outlays											
Discretionary	608	638	656	676	693	713	728	744	765	785	804
Mandatory	944	986	1,032	1,096	1,167	1,244	1,296	1,368	1,455	1,544	1,642
Net interest and excess cash	224	218	201	174	151	126	101	72	41	7	-29
Subtotal	1,776	1,841	1,890	1,946	2,011	2,084	2,125	2,183	2,261	2,336	2,417
On-budget	1,445	1,498	1,540	1,586	1,641	1,703	1,733	1,780	1,845	1,903	1,966
Off-budget	330	343	350	360	370	381	392	403	416	432	451
Surplus	232	268	312	345	369	402	469	523	565	625	685
On-budget	84	102	126	143	154	169	222	260	288	332	377
Off-budget	149	165	186	202	215	232	247	263	278	293	307
OMB's *Mid-Session Review* Current-Services Baseline											
Revenues	2,013	2,085	2,164	2,247	2,340	2,448	2,558	2,685	2,815	2,951	3,104
On-budget	1,534	1,579	1,634	1,692	1,760	1,836	1,921	2,016	2,115	2,220	2,334
Off-budget	478	506	530	555	580	612	637	668	699	731	770
Outlays											
Discretionary	612	635	650	667	684	700	713	731	749	767	785
Mandatory	955	1,000	1,039	1,106	1,171	1,249	1,308	1,386	1,475	1,564	1,661
Net interest and excess cash	222	211	197	179	161	140	116	89	59	26	-13
Subtotal	1,789	1,845	1,886	1,952	2,016	2,088	2,137	2,206	2,283	2,357	2,433
On-budget	1,459	1,500	1,531	1,588	1,641	1,702	1,739	1,794	1,857	1,914	1,970
Off-budget	330	346	354	364	375	386	398	412	426	443	464
Surplus	224	239	279	295	324	360	422	479	532	595	670
On-budget	75	79	102	104	119	134	182	222	259	307	364
Off-budget	148	160	176	191	205	226	239	256	273	288	306
Difference (CBO minus OMB)											
Revenues	-5	25	38	44	40	38	36	21	11	9	-2
On-budget	-5	22	32	37	35	37	34	23	17	15	10
Off-budget	1	3	6	7	5	1	2	-2	-5	-6	-12
Outlays											
Discretionary	-4	3	6	9	9	14	15	12	16	18	19
Mandatory	-11	-14	-6	-10	-4	-4	-11	-18	-20	-20	-20
Net interest and excess cash	2	7	4	-5	-10	-13	-16	-17	-18	-18	-16
Subtotal	-13	-4	4	-6	-5	-4	-11	-23	-22	-21	-16
On-budget	-13	-2	8	-2	0	1	-5	-15	-12	-10	-3
Off-budget	0	-3	-4	-4	-5	-5	-6	-9	-10	-11	-13
Surplus	9	29	34	49	45	42	47	44	34	30	14
On-budget	8	23	24	39	35	36	39	38	29	25	13
Off-budget	0	5	10	11	10	6	8	6	5	5	1
Memorandum:											
Surplus Excluding Social Security and Medicare's Hospital Insurance											
CBO	57	70	86	102	114	132	180	223	253	301	350
OMB	50	49	66	68	80	95	139	180	216	263	318
Difference	7	21	20	34	34	38	41	43	37	37	32

SOURCES: Congressional Budget Office; Office of Management and Budget.

surpluses than OMB does, and that effect—along with technical estimating differences—eventually dominates the discrepancy between the two agencies. The combination of such factors causes CBO's projections of net interest to fall below OMB's by $16 billion to $18 billion a year after 2005.

Uncertainty in Budget Projections

The federal budget is influenced by a number of factors that are difficult to predict, including new legislation. However, because the baseline is meant to serve as a neutral reference point for assessing policy changes, it makes no assumptions about future legislation. Therefore, the baseline incorporates only economic and technical assumptions.

Legislation has had relatively little impact on the budget in recent years, but estimates of the surplus have still deviated significantly from actual results for economic and technical reasons. In a $2 trillion budget, minor discrepancies in those factors can lead to sizable changes, which become exacerbated over time.

Such unforeseen economic developments as the sustained, rapid growth of GDP have boosted revenues and significantly improved the budget's condition. History suggests that the economy, currently in its longest peacetime expansion, will return to a more moderate level of growth over the next 10 years. Whether it does or not, in an economy as large as that of the United States, even minor fluctuations in either direction can produce results that differ substantially from CBO's current projections. For example, if real economic growth is just 0.5 percent higher or lower each year than projected, the surplus in 2010 could be $250 billion higher or lower than projected.[4]

Substantial uncertainty can also enter the projections from a myriad of technical factors, such as misestimates of the number of people who will qualify to receive various benefits or the level of benefits they will use. Estimates of spending are very sensitive to such technical factors, which have constituted the largest source of misestimates in CBO's projections of outlays. For example, if the use of medical services increases 1 percentage point faster than the projected growth of enrollment and general inflation would suggest, Medicare spending could increase by a total of $190 billion over the next 10 years.

Potential errors such as those highlight the danger in attributing precision to long-term projections. Ten-year estimates allow the Congress to consider the longer-term budgetary implications of legislation rather than focus only on short-term implications. However, that long time horizon also increases the likelihood that substantial discrepancies will emerge between actual results and projections. Since each year's estimates build on those of the previous year, longer projection periods imply a greater chance that errors will compound and will produce more uncertainty in the estimates used to make policy decisions.

In fact, looking at estimates produced since 1986, CBO's projections of revenues one year in advance have differed from actual outcomes by about 4.1 percent in absolute terms (ignoring whether a difference is an overestimate or an underestimate). That difference is about two and a half times larger, 10.8 percent, when revenues are projected five years into the future. For outlays, the corresponding figures are 3.1 percent for projections one year ahead and 4.8 percent for those five years in advance.[5]

4. For a discussion of how the economy affects the budget, see Congressional Budget Office, *The Budget and Economic Outlook*, Appendix C.

5. For a more detailed discussion of uncertainties in forecasting and their implications for budget projections, see Congressional Budget Office, *The Budget and Economic Outlook*, Chapter 5. (Some of these calculations were updated since that report was issued.)

Chapter Two

The Economic Outlook

The surprising economic developments since the last quarter of 1999 have led the Congressional Budget Office to strengthen its forecast of economic activity in 2000 and 2001 (see Table 2-1). CBO now expects nominal and real (inflation-adjusted) gross domestic product to be moderately higher than it anticipated in January, as a result of unexpectedly rapid growth in economic activity during the fourth quarter of 1999 and the first quarter of 2000. In addition, CBO has raised its forecast for inflation and interest rates on the basis of unforeseen increases in those measures. Economic activity now appears to have slowed in the second quarter of 2000, but even with that slackening, the economy remains strong.

The current CBO forecast assumes that growth of the nation's real GDP will average 4.9 percent this year and 3.1 percent next year. Inflation, as measured by growth in the consumer price index for all urban consumers (CPI), is expected to increase this year by almost a full percentage point, rising to 3.1 percent before tapering off slightly next year. Interest rates on three-month Treasury bills and 10-year Treasury notes are expected to climb to about 6¾ percent by 2001.

The impressive growth of economic activity during the fourth quarter of 1999 and the first quarter of 2000 has also raised CBO's projections of real GDP for 2002 through 2010. Indeed, that spurt adds to the evidence that the nation some time ago entered a "new era" of higher productivity growth that has raised the economy's productive capacity. If productivity had continued along its lower trend of the past two decades, the soaring demand of the past few quarters would have led to shortages or to an upswing in inflation. But reports of shortages have not been widespread, nor has the lag between orders and deliveries increased. And inflation, though showing some signs of picking up, remains low.

Yet judging the extent and magnitude of the increase in the trend growth of productivity is immensely difficult. Productivity rose 3.7 percent between the first quarters of 1999 and 2000, well above the 1.6 percent it averaged from 1973 through 1994. (Some of the recent growth, however, is the temporary result of the strength in demand.) CBO's current estimate of the trend of productivity growth is 2.5 percent for the past five years and 2.4 percent for the next 10 (after adjusting for the temporary effects of cyclical variations in demand). Those estimates are slightly higher than the ones incorporated in CBO's January forecast for the two periods.

The State of the Economy

The economy remains in robust health, although there are signs that growth is slowing and price and wage inflation may be heating up. The slowing largely reflects a return to a more normal pace of activity. However, some portion of the deceleration is probably the result of actions over the past year by the Federal Reserve to raise interest rates and thus tighten conditions in the nation's money markets.

Table 2-1.
CBO's Economic Projections for Calendar Years 2000-2010

	Actual	Forecast		Projected Annual Average	
	1999	2000	2001	2001-2005	2006-2010
Nominal GDP (Billions of dollars)					
July 2000	9,256	9,907	10,433	12,508[a]	15,675[b]
January 2000	9,235	9,692	10,154	12,054[a]	15,024[b]
Nominal GDP (Percentage change)					
July 2000	5.7	7.0	5.3	4.8	4.6
January 2000	5.4	5.0	4.8	4.5	4.5
Real GDP[c] (Percentage change)					
July 2000	4.2	4.9	3.1	2.7	2.7
January 2000	3.9	3.3	3.1	2.7	2.8
GDP Price Index[d] (Percentage change)					
July 2000	1.4	2.1	2.1	2.0	1.8
January 2000	1.4	1.6	1.6	1.7	1.7
Consumer Price Index[e] (Percentage change)					
July 2000	2.2	3.1	2.7	2.7	2.5
January 2000	2.2	2.5	2.4	2.5	2.5
Unemployment Rate (Percent)					
July 2000	4.2	3.8	3.7	4.3	5.1
January 2000	4.2	4.1	4.2	4.6	5.2
Three-Month Treasury Bill Rate (Percent)					
July 2000	4.6	5.9	6.7	5.3	4.8
January 2000	4.6	5.4	5.6	5.1	4.8
Ten-Year Treasury Note Rate (Percent)					
July 2000	5.6	6.5	6.8	6.0	5.7
January 2000	5.6	6.3	6.4	5.9	5.7
Tax Bases (Percentage of GDP)					
Corporate profits[f]					
July 2000	9.2	9.2	8.4	7.6	7.0
January 2000	9.1	8.6	8.2	7.7	7.2
Wages and salaries					
July 2000	48.3	48.1	48.5	48.6	48.3
January 2000	48.5	48.8	48.8	48.9	48.8

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

NOTES: Percentage changes are year over year.

Year-by-year economic projections for calendar years 2000 through 2010 appear in Appendix D.

a. Level of GDP in 2005.

b. Level of GDP in 2010.

c. Based on chained 1996 dollars.

d. The GDP price index is virtually the same as the implicit GDP deflator.

e. The consumer price index for all urban consumers.

f. Corporate profits are book profits.

The Growth of Demand

Domestic demand in the fourth quarter of 1999 and the first quarter of 2000 was much stronger than many forecasters had expected. Real final sales to domestic purchasers (that is, purchases by U.S. households, governments, and businesses excluding investment in inventories) grew at an average annual rate of 6.9 percent in that period, more than a percentage point faster than the average pace over the prior four quarters. Some of that rapid growth may have been due to unseasonably warm weather during the closing months of last year and the first months of this year, which encouraged spending on construction and retail sales. Much of the growth in retail sales, however, may reflect the large gains in the stock market—the so-called wealth effect—in late 1999. The growth of spending on producers' durable equipment and software was also very strong in the first quarter of this year, climbing at an annual rate of 24.7 percent. Some of that growth is probably temporary, however, reflecting a resumption of purchases after concerns about Year 2000 (Y2K) bugs proved to be unfounded.

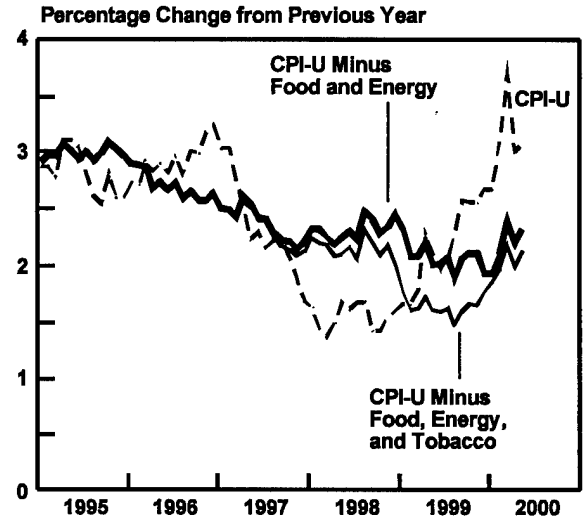
Recent data indicate a slackening in the growth of demand from its recent blistering pace, although demand remains at a high level. Retail sales, and particularly sales of durable goods, fell in both April and May of this year. Moreover, average sales of existing single-family homes (through May) were 3.6 percent below their average for the fourth quarter of 1999. And average starts of single-family homes in April and May were 3.9 percent below their average for the first quarter of 2000.

The weakness in the single-family housing market can be traced in part to the recent rise in interest rates on home mortgages. Over the past year, the interest rate on conventional 30-year mortgage loans has risen about 1.3 percentage points, reaching 8.5 percent in May.

Price and Wage Inflation

The near-term outlook for inflation in prices and wages has worsened slightly since CBO prepared its January forecast. Inflation in the price of energy, as well as in the CPI excluding prices for food, energy, and tobacco, has been higher in 2000 than forecasters anticipated (see Figure 2-1).[1] Labor compensation and the prices of imports have also risen faster than expected this year, bringing additional concern about pressure on the rate of inflation.

Figure 2-1.
Measures of Consumer Price Inflation, 1995-2000



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

NOTE: The CPI-U is the consumer price index for all urban consumers.

That concern is reinforced by the recent widening of the gap between actual and potential GDP, a commonly cited measure of inflationary forces. Potential GDP is the estimated level of output that can be sustained for a substantial period without raising the inflation rate. When actual GDP is much greater than its potential level, the inflation rate tends to rise. (In other words, when demand is greater than supply, prices tend to be pushed up.) The reverse is true as well.

The rapid growth of demand in the fourth quarter of last year and the first quarter of this year has widened the GDP gap and heightened inflationary pressures. Although demand grew by nearly 7 percent

1. Extraordinary developments—legal settlements and increases in excise taxes—have sharply boosted the price of tobacco over the past two years.

during that period, estimates of the growth of potential GDP were considerably smaller, in the range of 3 percent to 4 percent. Consequently, CBO's estimate of the GDP gap rose from 1.7 percent of potential GDP in the third quarter of 1999 to 3.1 percent in the first quarter of this year. Even though the link between the GDP gap and inflation is far from perfect, the growing divide signals the danger that inflation may be heating up.

In fact, many prices now appear to be climbing more rapidly than they did last year. Categories such as medical care, housing rents, furniture, recreation, and education are all experiencing price hikes. In November of last year, for example, the rate of growth of the overall CPI and the CPI excluding food, energy, and tobacco was 2.6 percent and 1.7 percent, respectively, measured from November 1998. By May of this year, the overall CPI had risen by 3.1 percent since May 1999, and the CPI excluding food, energy, and tobacco had climbed by 2.1 percent. (The price index for personal consumption expenditures registered similar increases.) Inflation as measured by the overall CPI may fall from current rates as energy prices recede, but the underlying rate seems poised to escalate further. (The underlying rate traditionally excludes food and energy prices.)

Labor compensation has also been growing more rapidly of late, bringing concerns that rising production costs will show up in prices. Total compensation (wages and salaries, and benefits) for private-industry workers, as measured by the employment cost index, rose by 4.6 percent for the year ending in March 2000, up from annual growth of 3.0 percent for the year ending in March 1999. With productivity growing by 3.7 percent over the past year, the growth in unit labor costs remains modest but is likely to pick up sharply if productivity growth slows.

In comparison with past months, import prices are doing less to keep inflation down. Prices for imported goods (excluding petroleum and computers) have grown at an average rate of 1.0 percent since mid-1999, after falling by an average of 1.7 percent during 1997, 1998, and the first half of 1999. Although not a major factor thus far, the recent strength in foreign economies may exacerbate the pressures on U.S. import prices in the coming months.

Petroleum prices have continued to rise rapidly this year, but not as rapidly as in 1999. The price of crude oil climbed by 27 percent between December 1999 and May 2000, after soaring 131 percent last year from a very depressed level. Consumer gasoline prices have risen as well, up by 28 percent through May of this year on top of a 30 percent jump last year. Nevertheless, analysts expect crude oil prices to be lower at the end of this year than they were in May.

Financial Developments

The recent strength of the economy and actions by the Federal Reserve have tightened conditions in financial markets over the past year. To help slow what it viewed as an overheating economy, the Federal Reserve raised its target for the federal funds interest rate (the overnight rate that banks charge one another) from 5.25 percent in August 1999 to 6.50 percent in May 2000. In addition, the interest rate on three-month Treasury bills rose from 4.73 percent in September to 5.92 percent in May.

Interest rates on long-term debt have also moved up. The rate on 10-year Treasury notes rose from 5.92 percent in September 1999 to 6.44 percent in May. Over the same period, the interest rate on high-grade, Aaa-rated corporate bonds went from 7.39 percent to 7.99 percent; lower-grade, Baa-rated bonds rose a little more, from 8.20 percent to 8.90 percent. The interest rate on conventional 30-year home mortgages climbed from 7.82 percent in September to 8.52 percent in May.[2]

In tandem with the rise in interest rates, stock prices have slipped. Although movements in stock prices are difficult to explain fully, one important factor may be the market's expectation that actions by the Federal Reserve to contain inflation will slow future corporate earnings. Higher interest rates, moreover, lower the prices of assets (like stocks) whose values depend on future streams of income. After recording

2. The rate on 30-year Treasury bonds increased only 8 basis points between September 1999 and May 2000. (A basis point is a hundredth of a percentage point.) That small uptick may reflect, in part, the smaller supply of 30-year Treasury debt: because of the federal surplus, the Treasury has both reduced its sales of 30-year debt and repurchased some of it.

strong gains in 1999, the major stock price indexes were lower by the end of May 2000 than at the end of last year; nevertheless, they were still generally higher than they were a year ago. In particular, the NASDAQ composite index, which comprises a large number of "new economy" stocks, was about 38 percent higher.

CBO's Economic Forecast for 2000 and 2001

Through the end of 2001, CBO expects the growth of real GDP to slow and inflation in consumer prices to rise (see Table 2-2). Continued high levels of demand this year, combined with signs of higher inflation, are likely to prompt the Federal Reserve to raise the federal funds rate further—in mid-June, financial markets were expecting the rate to climb to about 7 percent by early 2001. Other interest rates are likely to follow suit, which would help slow the economy next year and dampen the growth of inflation.

Higher interest rates could be a drag on the economy through several channels. CBO anticipates a slowdown in fixed investment, especially in residential construction. At the same time, with accelerating interest rates and faster growth in labor compensation holding down profits, stock prices are unlikely to continue increasing at the rate of the past several years. Consequently, the boost to consumer spending from higher stock prices should gradually diminish. Higher interest rates will also limit the demand for U.S. goods and services by helping keep the exchange value of the dollar strong.

Table 2-2.
The CBO Forecast for 2000 and 2001

	Actual 1999	Forecast 2000	Forecast 2001
	Fourth Quarter to Fourth Quarter (Percentage change)		
Nominal GDP	6.3	6.3	5.1
Real GDP[a]	4.6	4.0	2.9
GDP Price Index[b]	1.6	2.2	2.1
Consumer Price Index[c]			
Overall	2.6	2.9	2.9
Excluding food and energy	2.1	2.5	2.9
	Calendar Year Average (Percent)		
Real GDP[a]	4.2	4.9	3.1
Unemployment Rate	4.2	3.8	3.7
Three-Month Treasury Bill Rate	4.6	5.9	6.7
Ten-Year Treasury Note Rate	5.6	6.5	6.8

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

a. Based on chained 1996 dollars.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

As a result of those factors, CBO expects real GDP growth to slow to 3¼ percent during the second half of this year, down from its average of 4¼ percent during the 1997-1999 period and 6.4 percent in the last quarter of 1999 and the first quarter of 2000. During 2001, growth in real GDP is expected to fall further, to 2.9 percent.

Although GDP growth is expected to slow, CBO estimates that the GDP gap will remain large. Consequently, the underlying rate of inflation is likely to increase further during this year and next. Over the four quarters ending with the first quarter of 2000, the underlying rate of CPI inflation averaged 2.1 percent. By the end of 2001, CBO expects that rate to reach

Table 2-3.
CBO's Economic Projections for Fiscal Years 2000-2010

	Actual	Forecast		Projected Annual Average	
	1999	2000	2001	2001-2005	2006-2010
Nominal GDP (Billions of dollars)	9,116	9,758	10,303	12,370[a]	15,495[b]
Nominal GDP (Percentage change)	5.6	7.0	5.6	4.9	4.6
Real GDP[c] (Percentage change)	4.2	5.1	3.4	2.8	2.7
GDP Price Index[d] (Percentage change)	1.3	1.9	2.2	2.0	1.8
Consumer Price Index[e] (Percentage change)	1.9	3.0	2.7	2.7	2.5
Unemployment Rate (Percent)	4.3	3.9	3.7	4.3	5.1
Three-Month Treasury Bill Rate (Percent)	4.4	5.6	6.6	5.4	4.8
Ten-Year Treasury Note Rate (Percent)	5.3	6.4	6.8	6.1	5.7
Tax Bases (Percentage of GDP)					
Corporate profits[f]	9.0	9.3	8.7	7.7	7.0
Wages and salaries	48.3	48.1	48.4	48.6	48.4

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

NOTES: Percentage changes are year over year.

Year-by-year economic projections for fiscal years 2000 through 2010 appear in Appendix D.

a. Level of GDP in 2005.

b. Level of GDP in 2010.

c. Based on chained 1996 dollars.

d. The GDP price index is virtually the same as the implicit GDP deflator.

e. The consumer price index for all urban consumers.

f. Corporate profits are book profits.

3.0 percent. The tight labor market has already pushed up the growth rate of labor compensation, and that pressure is expected to persist. At the same time, the growth of labor productivity is likely to fall as the economy slows, dropping from the 3½ percent rate of the past two years to about 2¼ percent. Although that rate is high compared with growth rates before the late 1990s, such a slowdown could still boost unit labor costs in the short run.

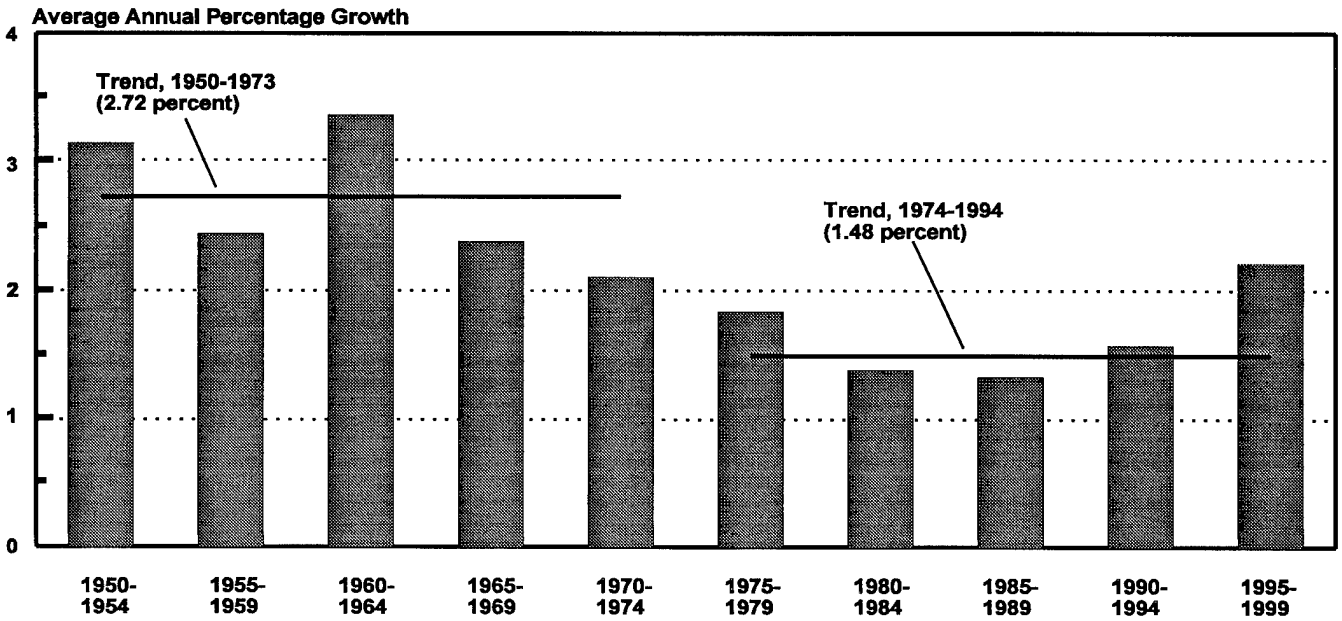
The Outlook Beyond 2001

CBO does not forecast the ups and downs of the economy more than two years ahead. Its projections of GDP beyond that period, for 2002 through 2010, simply extend historical patterns in the factors that underlie the growth of potential GDP—factors such as the growth of the labor force, the growth of productivity, and the rate of national saving.

In CBO's current projections, the major changes from January are moderately higher levels of real and nominal GDP (see Table 2-1 on page 24 and Table 2-3). The projected level of real GDP is higher because CBO now assumes that a larger share of GDP growth over the past five years has been permanent rather than cyclical; that assumption is reflected in CBO's new, higher estimate of the level of potential GDP. However, the average growth rate of potential GDP after 2001 is 3 percent, the same rate as in CBO's January projection.

The average growth rate of real GDP in CBO's new projection is slightly lower than in its January estimate. That is because the gap between actual and potential GDP is larger at the beginning of the projection period than it was in January, in spite of the upward revision CBO made to potential GDP. (Real GDP must grow more slowly than potential GDP after 2001 to bring GDP back to its potential level—which is then consistent with CBO's projection of a constant inflation rate.) Nominal GDP is also higher now than in CBO's January projection because the current estimate of inflation in the GDP price index is significantly higher from 2000 to 2003 and slightly higher thereafter.

Figure 2-2.
Labor Productivity in the Nonfarm Business Sector



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

Change in CBO's Estimate of Potential GDP

The extraordinary performance of the U.S. economy in the second half of the 1990s—specifically, the strong growth of output combined with low inflation—has convinced many analysts that the economy has entered a new era of greater productivity (see Figure 2-2 on page 29). Belief in such a shift was reinforced by the economy's ability to absorb the unusually rapid growth of demand during the last quarter of 1999 and the first quarter of 2000 without substantial shortages and a significant increase in inflation. Those circumstances suggest that the productive capacity of the economy (potential GDP) was greater than previously thought. Further support comes from the unemployment rate, which dropped by less than would have been expected had potential GDP followed its prior trend. Faced with that evidence, both CBO and private-sector economists have now incorporated a higher level of potential GDP in their current forecasts.

The average growth rate of potential GDP after 2001, however, is unchanged from CBO's January estimate of 3 percent. The reason is that although CBO has assumed higher trend growth in productivity, the effect of that increase has been largely offset by lower projected growth in the labor force.

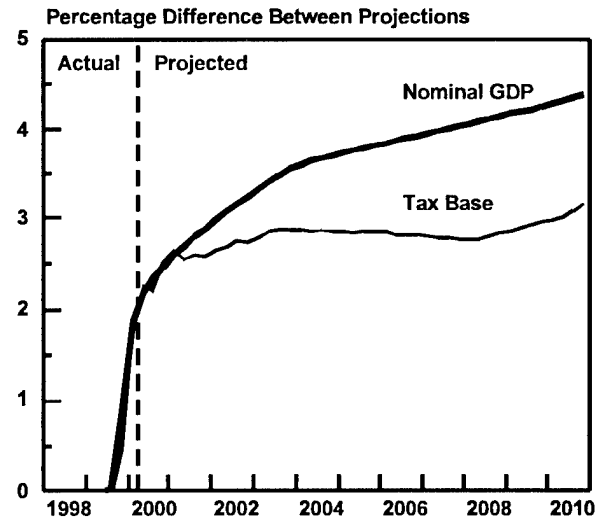
Revisions to Trend Growth in Productivity. A tremendous amount of uncertainty exists about whether the recent increase in the trend growth of productivity is permanent or temporary. CBO's January projections reflected the "new era" in two ways: they incorporated the very rapid growth of productivity in the production of computers that has driven down computer prices, and they took into account the recent high rates of business investment in computers and related equipment.[3] But those factors do not suffice to explain the economy's performance since 1995. CBO has therefore added about a quarter of a percentage point to its estimate of the trend growth rate of productivity (specifically, total factor productivity in the nonfarm business sector) in the second half of the 1990s. That addition boosts the estimated level of potential GDP by about 1 percent in 2000. Because of uncertainty about how long the higher productivity growth will last, CBO added only half as much to the productivity trend between 2000 and 2010.

Revision to Labor Force Growth. CBO has revised downward its projection of growth in the labor force after analyzing participation rates (as described in Appendix A). In particular, it appears that CBO's previous assumptions about the participation rates for some older age groups were too high. Reducing labor force growth between 2000 and 2010 subtracts about a tenth of a percentage point per year from the growth of potential GDP.

Change in CBO's Projections of Inflation

After climbing slightly this year and next, CBO's projection of CPI inflation settles down by 2004 to 2.5 percent, the same rate that CBO projected in January. Ultimately, the inflation rate is determined by monetary policy, and rates of inflation above 2½ percent are likely to trigger action by the Federal Reserve to reduce inflationary forces.

Figure 2-3.
Percentage Difference Between CBO's July and January 2000 Economic Projections



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

3. See Appendix A in Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2001-2010* (January 2000).

CBO has raised its projection of growth in the GDP price index slightly above its January projection because it now expects a smaller decline over the next 10 years in prices for computers. The change was made in the wake of recent reports suggesting that semiconductor prices will remain firm for several years until new production capacity is put in place.

Change in CBO's Tax-Base Projections

CBO's projections of taxes are closely connected to projections of economic activity and national income, as measured by the national income and product accounts, or NIPAs. Wage and salary disbursements and corporate profits are particularly important because they generate the most revenue. CBO has revised upward its projection of the NIPA measure for that "high tax" tax base (see Figure 2-3). However, the change is less than that in nominal GDP because in addition, CBO has substantially raised its projection of business fixed investment and that change increases deductions for corporate depreciation.

Comparison of Forecasts

The strong performance of the economy late last year and early this year has caused other forecasters besides CBO to raise their projections of GDP for 2000 and 2001 (see Table 2-4). In January, for example, the *Blue Chip* consensus of economic forecasts for the last quarter of 1999 and the first quarter of this year expected real GDP to grow at an average annual rate of 3.8 percent. (Many forecasters thought that GDP growth was stimulated slightly during 1999 by Y2K preparations and that it would slow in 2000 when those activities ceased.) In fact, real GDP growth averaged 6.4 percent for the fourth and first quarters. As a consequence, the average annual growth rate of real GDP for 2000 and 2001 in the *Blue Chip* consensus forecast increased from 3.3 percent in January to 4.1 percent in June.

Forecasters generally have also raised their estimates of inflation. Those hikes are based on larger-than-expected increases in prices and labor compensa-

Table 2-4.
Changes in Five Forecasters' Estimates for the 2000-2001 Period (In percent)

	Average Growth of Real GDP		Average Growth of GDP Price Index		Average Three-Month Treasury Bill Rate	
	January 2000 Forecast	June 2000 Forecast	January 2000 Forecast	June 2000 Forecast	January 2000 Forecast	June 2000 Forecast
Blue Chip	3.3	4.1	1.8	2.1	5.6	6.2
Standard & Poor's *DRI*	3.4	3.9	1.4	2.0	5.4	5.9
Macroeconomic Advisers	3.2	3.8	2.0	2.2	5.6	6.3
Administration	3.0[a]	4.0	1.8[a]	2.0	5.2[a]	6.0
CBO	3.2	4.0[b]	1.6	2.1[b]	5.5	6.3[b]

SOURCES: Congressional Budget Office; Aspen Publishers, Inc., *Blue Chip Economic Indicators* (January 10, 2000, and June 10, 2000); Standard & Poor's *DRI, The U.S. Economy* (January and June 2000); Macroeconomic Advisers, L.L.C., *Macroeconomic Advisers' Economic Outlook* (January 15, 2000, and June 15, 2000); *Budget of the United States Government, Fiscal Year 2001*; and Office of Management and Budget, *Mid-Session Review: Budget of the United States Government, Fiscal Year 2001* (June 26, 2000).

a. From the Administration's February forecast.

b. From CBO's July forecast.

Table 2-5.
Comparison of CBO and *Blue Chip* Forecasts for 2000 and 2001 (By calendar year, in percent)

	Actual 1999	Forecast 2000	Forecast 2001
Growth of Nominal GDP	5.7		
Blue Chip high 10		7.4	6.0
Blue Chip consensus		7.0	5.4
CBO		7.0	5.3
Blue Chip low 10		6.6	4.7
Growth of Real GDP	4.2		
Blue Chip high 10		5.1	4.0
Blue Chip consensus		4.8	3.3
CBO		4.9	3.1
Blue Chip low 10		4.5	2.7
Growth of GDP Price Index[a]	1.4		
Blue Chip high 10		2.3	2.6
Blue Chip consensus		2.1	2.1
CBO		2.1	2.1
Blue Chip low 10		1.9	1.5
Growth of CPI[b]	2.2		
Blue Chip high 10		3.3	3.1
Blue Chip consensus		3.1	2.6
CBO		3.1	2.7
Blue Chip low 10		2.7	2.0
Unemployment Rate	4.2		
Blue Chip high 10		4.2	4.4
Blue Chip consensus		4.0	4.1
CBO		3.8	3.7
Blue Chip low 10		3.9	3.8
Three-Month Treasury Bill Rate	4.6		
Blue Chip high 10		6.3	6.8
Blue Chip consensus		6.1	6.3
CBO		5.9	6.7
Blue Chip low 10		5.8	5.7
Ten-Year Treasury Note Rate	5.6		
Blue Chip high 10		6.7	6.9
Blue Chip consensus		6.4	6.4
CBO		6.5	6.8
Blue Chip low 10		6.1	6.0

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics; Aspen Publishers, Inc., *Blue Chip Economic Indicators* (June 10, 2000).

NOTE: The *Blue Chip* high 10 is the average of the 10 highest *Blue Chip* forecasts; the *Blue Chip* consensus is the average of the nearly 50 individual *Blue Chip* forecasts; and the *Blue Chip* low 10 is the average of the 10 lowest *Blue Chip* forecasts.

a. The GDP price index is virtually the same as the implicit GDP deflator.

b. The consumer price index for all urban consumers.

Table 2-6.
Comparison of CBO's and the Administration's Economic Projections for Calendar Years 2000-2010

	Actual	Forecast		Projected Annual Average	
	1999	2000	2001	2001-2005	2006-2010
Nominal GDP (Billions of dollars)					
CBO	9,256	9,907	10,433	12,508[a]	15,675[b]
Administration		9,886	10,407	12,660[a]	16,079[b]
Nominal GDP (Percentage change)					
CBO	5.7	7.0	5.3	4.8	4.6
Administration		6.8	5.3	5.1	4.9
Real GDP[c] (Percentage change)					
CBO	4.2	4.9	3.1	2.7	2.7
Administration		4.8	3.2	3.0	2.8
GDP Price Index[d] (Percentage change)					
CBO	1.4	2.1	2.1	2.0	1.8
Administration		1.9	2.0	2.0	2.0
Consumer Price Index[e] (Percentage change)					
CBO	2.2	3.1	2.7	2.7	2.5
Administration		3.3	2.6	2.6	2.6
Unemployment Rate (Percent)					
CBO	4.2	3.8	3.7	4.3	5.1
Administration		4.1	4.1	4.5	5.1
Three-Month Treasury Bill Rate (Percent)					
CBO	4.6	5.9	6.7	5.3	4.8
Administration		5.8	6.3	5.9	5.8
Ten-Year Treasury Note Rate (Percent)					
CBO	5.6	6.5	6.8	6.0	5.7
Administration		6.3	6.3	6.3	6.3
Tax Bases (Percentage of GDP)					
Corporate profits[f]					
CBO	9.2	9.2	8.4	7.6	7.0
Administration		8.9	8.2	8.1	7.5
Wages and salaries					
CBO	48.3	48.1	48.5	48.6	48.3
Administration		48.2	48.4	48.1	47.8

SOURCES: Congressional Budget Office; Office of Management and Budget, *Mid-Session Review: Budget of the United States Government, Fiscal Year 2001* (June 26, 2000).

NOTES: Percentage changes are year over year.

Year-by-year economic projections for calendar years 2000 through 2010 appear in Appendix D.

a. Level of GDP in 2005.

b. Level of GDP in 2010.

c. Based on chained 1996 dollars.

d. The GDP price index is virtually the same as the implicit GDP deflator.

e. The consumer price index for all urban consumers.

f. Corporate profits are book profits.

tion during the first part of this year. In addition, forecasts of interest rates have moved up in response to the stronger-than-expected growth in GDP and the prospect of higher inflation and more aggressive tightening of monetary policy by the Federal Reserve.

CBO's current forecast is very similar to the *Blue Chip* consensus forecast published in June of this year (see Table 2-5). There are three major differences: CBO expects slightly lower unemployment rates than does the consensus both this year and next; it anticipates lower interest rates on three-month Treasury bills this year but higher rates next year; and it expects higher interest rates on 10-year Treasury notes in both years. CBO's forecasts of the growth of real and nominal GDP and of the CPI are virtually identical to those of the consensus in both 2000 and 2001.

The Administration has recently updated its economic outlook, and its current forecast and projections are broadly similar to those of CBO (see Table 2-6). CBO assumes slightly slower growth of real GDP after 2000 and mildly higher inflation, and by 2010, CBO's projection of nominal GDP is 2½ percent below the Administration's. For the "high tax" tax bases, CBO assumes a share of GDP that is very close to that of the Administration. In dollars, therefore, CBO's tax-base projection is below the Administration's by about the same proportion as the projection of GDP. Unemployment rates are lower in CBO's projections than in the Administration's until the latter part of the projection period, when the two estimates both average 5.1 percent. CBO forecasts higher interest rates than does the Administration for 2000 and 2001, but in the medium term, the Administration assumes that short-term interest rates will average almost a percentage point more than CBO's assumptions.

Potential Sources of Uncertainty

This update reflects CBO's view of cyclical developments over the near term (2000 to 2001) and likely trends in the economy over the medium term (from 2002 to 2010). But CBO's 10-year projections, always uncertain to some degree, are even more tentative than usual, especially for the last five years of the projection period.[4] The reason is that the increased growth of productivity that CBO is now incorporating in its estimates is based on data only for the past five years. That limited span is insufficient to determine whether productivity has, indeed, shifted to a higher level, moved to a faster trend rate of growth, or temporarily deviated from underlying trends. As for CBO's forecast for the near term, those estimates could miss the mark for other reasons, some of which imply more optimistic outcomes and some more pessimistic results than the forecast indicates.

On the optimistic side, the economy might be able to expand faster than CBO expects without a significant increase in inflation for some time to come. Two conditions would be necessary: the productivity surge of recent years would have to reflect a substantially greater underlying trend in productivity growth than CBO has so far estimated, and the rate of growth of real compensation per hour would have to remain below the rate of growth of labor productivity. Under such circumstances, the Federal Reserve would not feel the need to tighten monetary policy. In addition, the growth of profits, the prices of stocks, and the level of investment could all remain strong, supporting robust economic growth.

But what if the increase that CBO is assuming for the trend growth of productivity is too high? In that case, inflationary pressures and the outlook for profits may be worse than CBO is forecasting.

Another major uncertainty is the rate of growth of labor compensation. It may remain subdued, or it may increase more rapidly than CBO expects because of extremely tight labor markets and rising costs for health care. CBO's forecast assumes that real growth in compensation is only slightly greater than productivity growth for a few years. If compensation rises faster than productivity, inflation may increase more than CBO has anticipated.

An unwinding of the factors that have promoted strong economic growth with low inflation may also weaken the stock market. A number of observers be-

4. Appendix B discusses CBO's record of economic forecasts.

lieve that stocks are substantially overvalued; a drop in corporate profits, coupled with higher inflation and interest rates in the second half of this year, could weaken the market severely. A significant correction could produce outflows of capital from the United States to foreign markets and slower growth in consumer spending and business investment than CBO now envisions.

Some analysts are also concerned that the U.S. trade deficit is unsustainably high and that its resolution might involve a sharp decline in the dollar and a rise in the rate of inflation. The trade deficit is likely to shrink as the growth of demand in the United States returns to more normal levels. However, to the extent that the attractiveness of investing in the United States derives from the strength of the stock market, and particularly the strength of "new economy" stocks, a sharp reduction in U.S. stock prices could precipitate a withdrawal of capital from the United States. That would weaken the exchange value of the dollar and drive prices higher on U.S. imports—which in turn could spur the Federal Reserve to tighten monetary conditions.

Alternatively, a more traditional boom-bust scenario could trigger a recession. If economic growth (both at home and abroad) was greater than anticipated over the next few years and boosted inflation, the Federal Reserve might raise interest rates aggressively, which could precipitate a recession by 2003. (CBO examined that scenario in January. It found that an "average" recession would weaken the budget outlook but not by enough, on its own, to push the budget into deficit—even during the years of recession.)[5]

5. See Congressional Budget Office, *The Budget and Economic Outlook*, Box 5-1, p. 104.

Appendixes

Appendix A

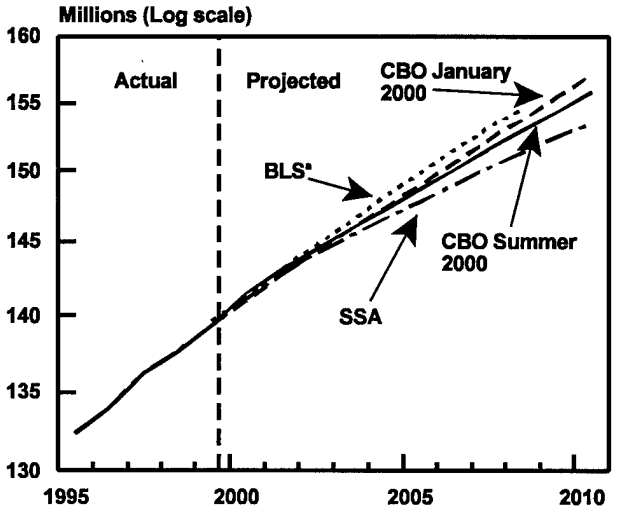
CBO's Labor Force Projections

The economy's potential output depends on the amount of labor and productive capital that are available and on the productivity of both. Consequently, the growth of output depends in large part on the growth of the labor force—which in turn hinges on two largely independent factors: changes in the labor force participation rate (the fraction of the adult civilian noninstitutional population that is either working or actively looking for work) and increases in the size of that population.

This appendix outlines the Congressional Budget Office's (CBO's) 10-year estimates of labor force participation rates for various age groups and both sexes. It also explores the large discrepancy in growth between two alternative measures of employment that has arisen since 1990. One implication of the discrepancy is that the population estimates used to gauge the current size of the labor force and to project its growth over the next 10 years may be too low. If they are, that does not necessarily imply that today's level of potential output is understated, since that estimate is derived independently of population estimates. But uncertainty about the future growth of the population does add to uncertainty about the growth of output.

CBO projects that the U.S. labor force will total 155.8 million people in calendar year 2010, implying an average growth rate between 1999 and 2010 of just over 1 percent a year. That total—which reflects updated assessments of labor force participation rates among specific groups—is about 1.3 million lower than the figure in CBO's previous *Budget and Economic Outlook,* published in January (see Figure A-1). However, it is considerably higher than the Social Security Administration's (SSA's) projection of 153.4 million. The Bureau of Labor Statistics (BLS) has made detailed projections of the labor force only through 2008; CBO's projection for that year is 1.7 million below BLS's but about 1.6 million above SSA's. In addition, CBO's projection of average annual growth in the labor force is lower than those of the major commercial forecasters (see Figure A-2).

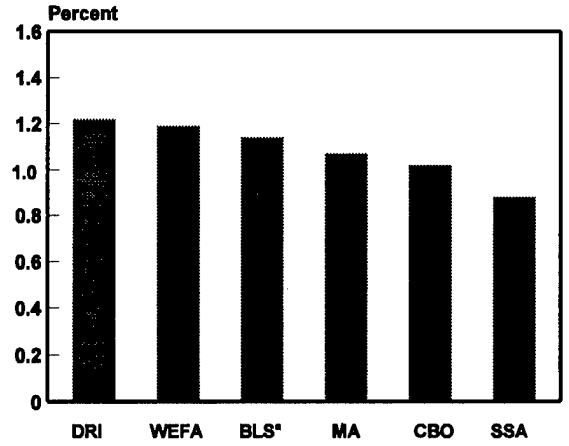
Figure A-1.
Alternative Projections of the Size of the Labor Force Through 2010 (By calendar year)



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics (BLS); Social Security Administration (SSA).

a. The BLS projections extend only through 2008.

Figure A-2.
Alternative Projections of Average Annual Growth in the Labor Force, 1999-2010 (By calendar year)



SOURCES: Standard & Poor's DRI; WEFA; Department of Labor, Bureau of Labor Statistics (BLS); Macroeconomic Advisers (MA); Congressional Budget Office; Social Security Administration (SSA).

a. The BLS projections extend only through 2008.

Labor Force Participation Rates

Participation in the labor force depends on a variety of factors. In principle, people choose whether to participate by weighing the advantages (primarily their expected after-tax wages and benefits) against the attractiveness of available alternatives (such as retiring, caring for children, or attending school). The higher the wage rate, the more likely a person will be to choose work. Changes in the supply of and demand for skills can also influence participation rates through their effects on both wages and perceived opportunities to work. In addition, wealth and nonlabor income tend to reduce work effort. Sources of income as diverse as welfare and disability payments, retirement income, stock market investments (unless tied directly to work through stock options), and even earnings of other household members have the effect of reducing participation in the labor force. Moreover, changing preferences for work relative to other activities can affect participation. Those factors are difficult to forecast, lending uncertainty to projections of labor force participation. At the same time, however, participation follows fairly predictable patterns over people's lifetimes.

CBO tries to assess the most likely path for the overall rate of labor force participation by examining participation rates by age and sex and by tracking the behavior of cohorts (groups born during specific intervals). Its projections take into account historical patterns for particular age and sex groups, patterns for specific cohorts relative to those of their predecessors, and other known or predictable influences on participation. As an example of the kind of assessment that CBO makes, the participation rate for women ages 45 to 49 was considerably higher in 1999 than it had been 10 years earlier, so one might reasonably expect that the participation rate for women ages 55 to 59 would be higher in 2009 than it was in 1999.

Taking into account the various age and sex categories and population projections for each group, CBO estimates an overall rate of labor force participation in 2008 of 67.1 percent—the same rate as in 1999 (see Table A-1). Using SSA's intermediate alternative population projections, that figure implies a labor force of approximately 153.0 million people in 2008.[1]

Other forecasters either implicitly or explicitly assume different participation rates. With one exception (women ages 20 to 24), CBO's projections for specific groups fall within the bounds of the BLS and SSA projections.[2] The differences are relatively minor for younger age groups and for men between 25 and 54 but are substantial for women in that age range and for people 55 and over. Some private forecasts (notably those of Standard & Poor's DRI and WEFA) are much higher than CBO's projection mainly because

1. Those numbers are given for 2008 rather than 2010 (the last year of CBO's current 10-year projection period) to facilitate comparison with BLS projections.

2. The BLS projections are discussed at length in Howard N. Fullerton, Jr., "The Labor Force: Steady Growth, Changing Composition," *Monthly Labor Review*, vol. 122, no. 11 (November 1999), pp. 19-32. The SSA projections are not published in detail and are provided by the agency to CBO.

Table A-1.
CBO's Projections of the Labor Force, by Age Group and Sex (By calendar year)

	Actual 1999	Projected 2008		
	Labor Force Participation Rate (Percent)	Labor Force Participation Rate (Percent)	Population (Millions)	Labor Force (Millions)
People Under 25	65.5	65.7	38.0	25.0
Teens	52.0	52.1	17.6	9.2
Men 20 to 24	81.9	81.9	10.2	8.3
Women 20 to 24	73.2	73.2	10.2	7.5
Men Ages 25 to 54	91.7	90.9	60.2	54.7
25 to 34	93.3	92.9	18.4	17.0
35 to 44	92.8	92.1	20.2	18.6
45 to 54	88.8	88.1	21.6	19.1
Women Ages 25 to 54	76.8	78.4	62.2	48.8
25 to 34	76.4	78.9	18.8	14.8
35 to 44	77.2	79.0	21.0	16.6
45 to 54	76.7	77.5	22.5	17.4
People 55 and Over	31.8	36.2	67.6	24.5
Men 55 to 64	67.9	68.1	15.7	10.6
Women 55 to 64	51.5	53.0	17.0	9.0
Men 65 to 69	28.5	30.8	5.0	1.5
Women 65 to 69	18.4	21.2	5.7	1.2
Both sexes 70 and over	8.1	8.6	24.3	2.1
Total	67.1	67.1	228.0	153.0

SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics; Social Security Administration.

they implicitly assume higher labor force participation; all use similar projections of the population.[3]

People Under 25

For teens and young adults—both male and female —no clear trend in participation rates emerged during the 1990s, and CBO projects little change in the future (see Figure A-3). In the case of teens, whose participation rates have shown considerable year-to-year volatility, CBO assumes a participation rate of 52.1 percent in 2008, which equals the average between 1997 and 1999. By comparison, BLS projects 52.7 percent participation for teens in 2008, and SSA projects 51.3 percent. For people ages 20 to 24, CBO assumes that participation rates will hold constant at their 1999 levels of 81.9 percent for men and 73.2 percent for women (see Table A-1).

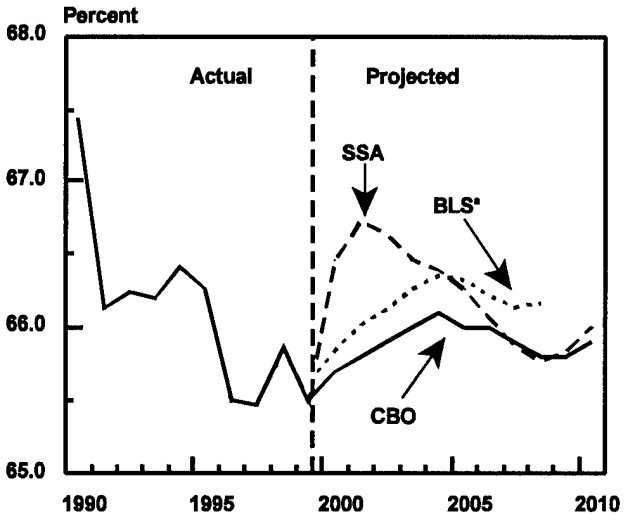
Men Ages 25 to 54

In 1999, 91.7 percent of men ages 25 to 54 participated in the labor force. That figure represents a decline from the rate of 10 years earlier, 93.7 percent.[4]

3. BLS and the private forecasters rely on the Census Bureau's mid-range population projections, which differ slightly from those of SSA. Virtually all of the difference between the BLS and SSA labor force projections reflects differing assumptions about participation, not population projections.

4. Anne Polivka and Stephen M. Miller estimate that methodological changes in 1994 reduced the participation rate for that group by 0.4 percentage points. Thus, on a comparable basis, the 1989 figure would be approximately 93.3 percent rather than 93.7 percent. See Polivka and Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues,* NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

Figure A-3.
Alternative Projections of Labor Force Participation Rates for People Under 25 (By calendar year)



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics (BLS); Social Security Administration (SSA).

NOTE: The figures for 1993 and earlier years are adjusted for the redesign of the Current Population Survey (CPS), based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

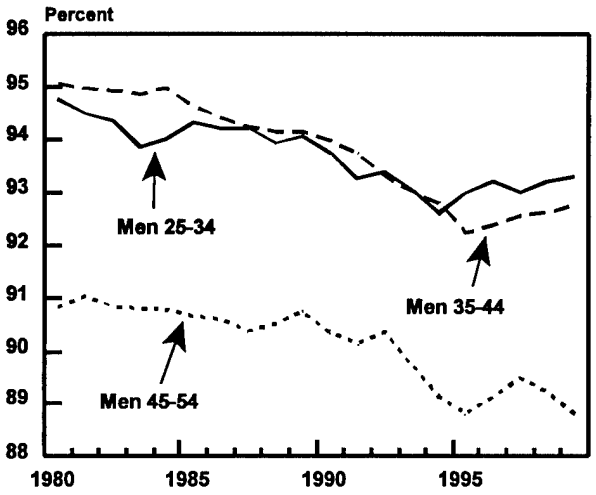
a. The BLS projections extend only through 2008.

In part, the decline reflects a shifting age mix, as the number of 45- to 54-year-olds—the age group where participation falls off as workers begin to retire—grew as a share of the entire category. Nonetheless, the downward trend occurred within each of the age groups in that category (see Figure A-4).

The key question for forecasters is whether and at what rate the downward trend will continue. BLS projects that the participation rate for men ages 25 to 54 will fall to 91.3 percent by 2008, with most of the decrease reflecting continuing shifts in the age mix. For its part, SSA projects continuing declines in participation in the narrower age groups in addition to changes in the age mix, resulting in an overall participation rate of 90.5 percent for these men. The difference between those two projections translates to about 500,000 people in the projected labor force in 2008.

CBO's projection for men ages 25 to 54 lies almost exactly between those forecasts, at 90.9 percent. To project participation for men who will be in the oldest subgroup (ages 50 to 54) in 2008, CBO compares the participation rate of men in that age group today with their rate 10 years earlier (when the same cohort was ages 40 to 44). CBO assumes that the ratio between those two rates will rise slightly for men who will be in the 50-54 age group in 2008, but to a lesser extent than the ratio implied by BLS's projection for this group (see Figure A-5).

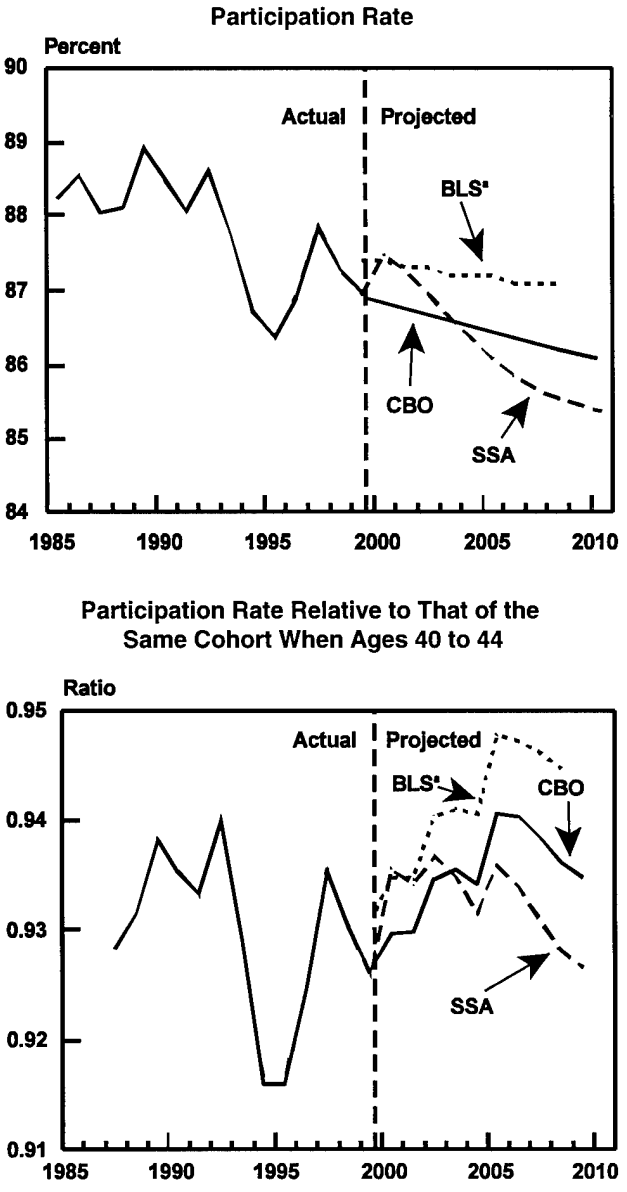
Figure A-4.
Labor Force Participation Rates for Men Ages 25 to 54, by Age Group, 1980-1999 (By calendar year)



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

NOTE: The figures for 1993 and earlier years are adjusted for the redesign of the Current Population Survey (CPS), based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

Figure A-5.
Alternative Projections of Labor Force Participation Rates for Men Ages 50 to 54 (By calendar year)



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics (BLS); Social Security Administration (SSA).

NOTE: The figures for 1993 and earlier years are adjusted for the redesign of the Current Population Survey (CPS), based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

a. The BLS projections extend only through 2008.

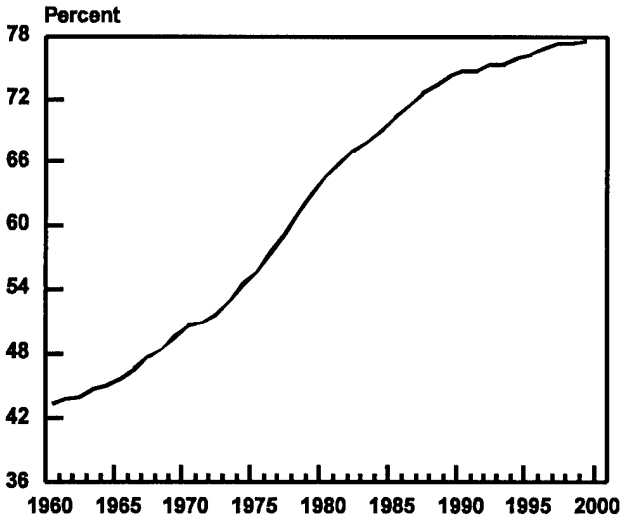
Women Ages 25 to 54

The labor force participation rate among women ages 25 to 54—which surged from just over 40 percent at the end of the 1950s to 74 percent at the end of the 1980s—continued to rise in the 1990s, although at a much slower rate (see Figure A-6). Much of the increase reflected a generational shift, as women of the baby-boom generation (those born between 1946 and 1964) participated in the labor force at significantly higher rates than their predecessors did. (That effect, however, has largely run its course for women of these prime working ages; only the 50-54 age group continues to show a rapid increase in participation.) In addition, women's wages relative to those of men have risen despite the increased supply of women in the workforce, reflecting long-term shifts in demand that favor women. That increase in wages has encouraged higher participation among women. The participation rate for women ages 25 to 54 reached 76.8 percent in 1999 and an average of 77.4 percent in the first five months of 2000.

BLS and SSA differ widely in their projections for these women. For the age category as a whole, BLS foresees further modest increases in participation, reaching 79.7 percent by 2008. SSA, in contrast, projects virtually no increase from the levels of the past several years and expects the participation of women ages 40 to 54 to actually decline. As a result, BLS's projection of the size of the female labor force ages 25 to 54 in 2008 exceeds SSA's by 2 million—four times the difference between the two agencies' projections for men in that age group.

CBO assumes a participation rate for women ages 25 to 54 in 2008 of 78.4 percent—slightly closer to BLS's figure than to SSA's. For the younger age groups in that category, CBO believes that continued shifts in the demand for labor, more flexible parental-leave policies, and perhaps greater telecommuting opportunities will combine to raise participation rates slightly. In addition, participation rates among women ages 25 to 34 have continued to increase modestly throughout the 1990s; CBO assumes that the trend will be carried forward into the 35-44 age group during the next decade. However, the scope for such an increase is limited by the preference in some households for mothers to raise their children full time. For

Figure A-6.
Labor Force Participation Rate for Women Ages 25 to 54, 1960-1999 (By calendar year)



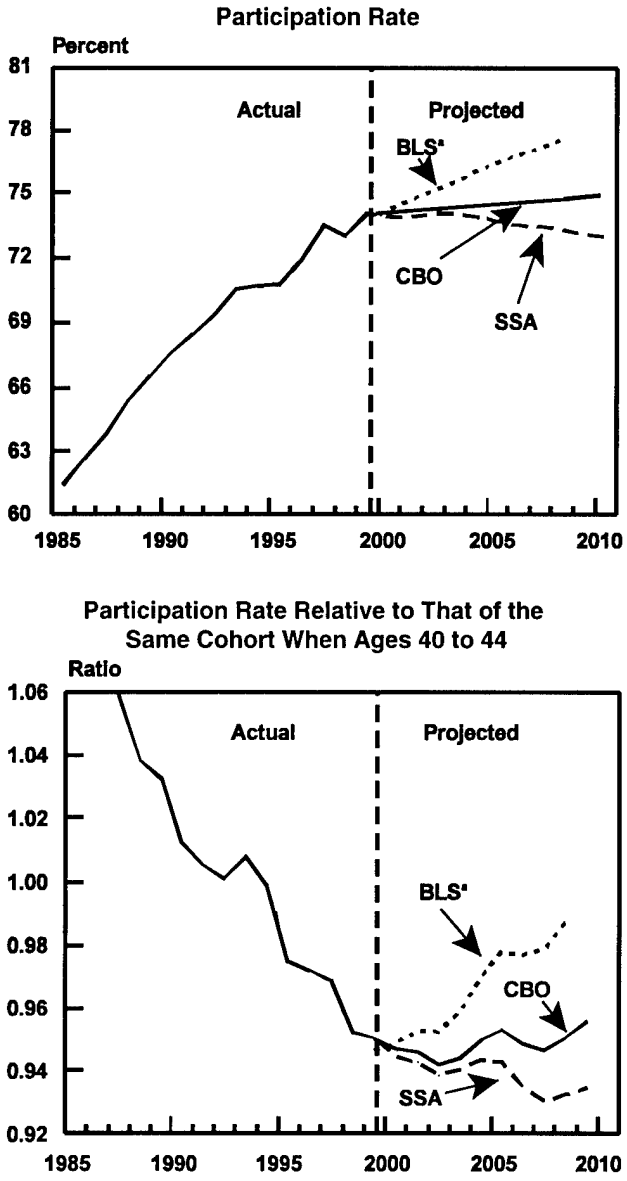
SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

NOTE: The figures for 1993 and earlier years are adjusted for the redesign of the Current Population Survey (CPS), based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

women ages 45 to 49, CBO projects a participation rate slightly above that of 40- to 44-year-olds, as has been the case for the past several years.

For women ages 50 to 54, the participation rate in 2008 is projected at 74.7 percent, meaning that the ratio of that group's participation relative to that of women in the same cohort 10 years earlier will be the same as in 1999 (see Figure A-7). That ratio has declined substantially over the past decade. Nevertheless, the BLS projection for this age group implies a sharp reversal of that fall. In contrast, SSA expects that ratio to continue falling, and it projects that the group's labor force participation rate will also decline.

Figure A-7.
Alternative Projections of Labor Force Participation Rates for Women Ages 50 to 54 (By calendar year)



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics (BLS); Social Security Administration (SSA).

NOTE: The figures for 1993 and earlier years are adjusted for the redesign of the Current Population Survey (CPS), based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

a. The BLS projections extend only through 2008.

People 55 and Over

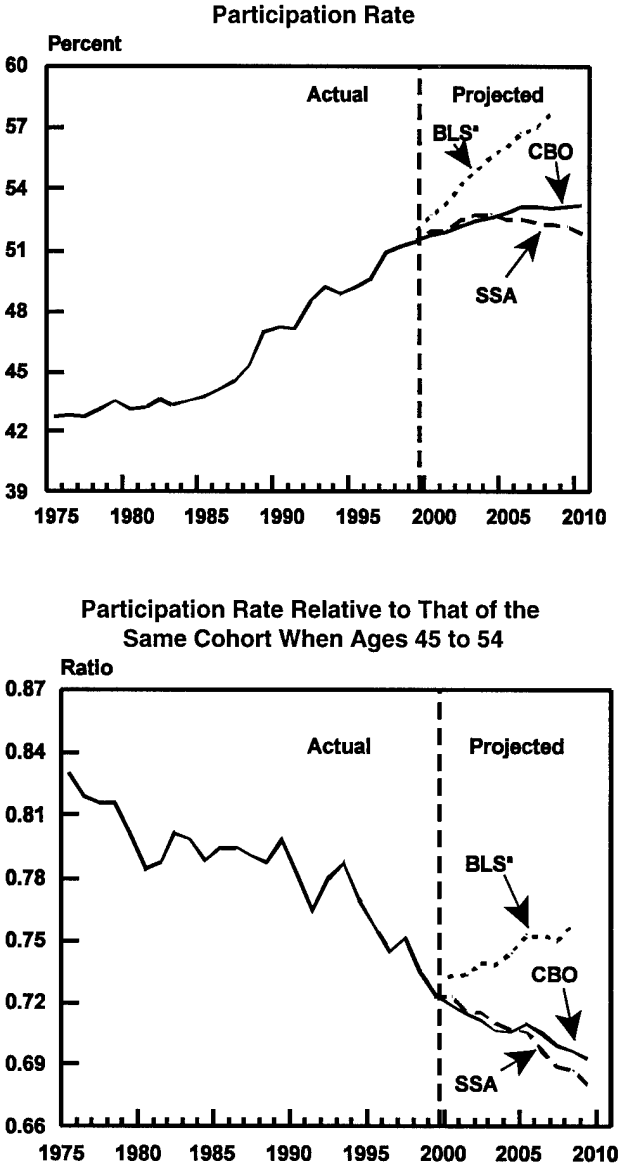
The key issues in projecting labor force participation for people over 55 relate to retirement and, to a lesser extent, disability. The long-standing trend toward declining participation among men of that age has halted in the past several years and may even have reversed slightly. Meanwhile, consistent with the trend toward higher participation among younger women, participation by women ages 55 to 64 rose from a percentage in the low 40s throughout the 1970s and early 1980s to 51.5 percent in 1999 (see Figure A-8).

BLS and SSA differ significantly in their projections for older age groups, especially among women. BLS expects participation rates for both men and women ages 55 to 64 to continue increasing at a pace comparable with that of the past five years. That projection reflects a shift in the relative sizes of the 55-59 and 60-64 age groups, as well as significant increases in participation among men ages 60 to 64 and among both female age groups. SSA, in contrast, projects a decline in participation among men ages 55 to 59 and only slight increases for the other age groups within this category. For men ages 65 to 69, BLS projects larger increases than SSA does, but for women in that age group, the pattern is reversed.

CBO's assumptions about older workers in the labor force are generally closer to those of SSA than those of BLS. One reason, which applies to people ages 55 to 64, is that both CBO's and SSA's projections explicitly account for anticipated increases in the incidence of disability claims, whereas BLS does not appear to take those increases into account as directly. Accounting for disability is important in projecting labor force participation because the available evidence suggests that increases in disability translate directly into declines in employment. In addition, although a further increase in older women's participation is likely as the baby-boom generation enters these age groups, a trend toward earlier retirement by women who have been working is also apparent.

In the other direction, the recent repeal of the Social Security earnings test is likely to boost the labor force participation rate of people ages 65 to 69. The results of a recent study suggest that eliminating the earnings test will increase participation among people

Figure A-8.
Alternative Projections of Labor Force Participation Rates for Women Ages 55 to 64 (By calendar year)



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics (BLS); Social Security Administration (SSA).

NOTE: The figures for 1993 and earlier years are adjusted for the redesign of the Current Population Survey (CPS), based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, NBER Studies in Income and Wealth (Cambridge, Mass.: National Bureau of Economic Research, 1999), pp. 249-286.

a. The BLS projections extend only through 2008.

between Social Security's normal retirement age (now 65) and 69.[5] CBO took that effect into account in projecting participation rates for this age group. However, given the small size of the group, the impact on the total labor force will be modest—on the order of 100,000 additional workers in 2008.

Are Projections of Population Growth Too Low?

Differences between CBO's projections and those of other forecasters mostly reflect differing assumptions about labor force participation rates, because all forecasters use similar population projections. However, those projections are themselves subject to uncertainty. In particular, two factors suggest that current estimates of the size of the labor force in the 1990s may be too low. First, a substantial discrepancy has emerged between the growth rates of two measures of employment: one based on the number of people on employers' payrolls and another based on the number of employed people derived from the Current Population Survey (CPS).[6] Second, BLS raised its estimates of employment levels based on the CPS significantly when tabulations from each of the past three decennial censuses were incorporated.

Differences Between Measures of Employment

The first measure of employment, establishment employment, is based on a monthly survey of employers. Each year, the results of that survey are adjusted to match a nearly complete count of employees derived from reports to the state agencies that administer unemployment insurance (UI) programs (with separate counts for the few industries that are not covered by the UI system). Those data have been adjusted through March 1999. The second measure, household employment, is based on the CPS, which is administered monthly to about 50,000 households—a sample that is designed and weighted to be representative of the entire U.S. population.[7] How BLS translates the results of that survey to the entire population depends critically on the Census Bureau's underlying estimates of the size and composition of the population.

Between 1990 and 1999, employment as measured by the establishment survey grew by 19.4 million, or 1.8 percent a year, on average. During the same period, the number of employed people in the CPS increased by a relatively modest 14.7 million, or 1.3 percent annually (see Figure A-9).

In principle, conceptual differences between the two surveys could account for that difference. The CPS includes self-employed people, agricultural workers, employees of private households, and unpaid family workers, but the establishment survey does not. In contrast, people holding more than one job can be counted two or more times in the establishment survey but only once in the CPS. In addition, methodological changes to the CPS that were introduced in 1994 might have contributed to the difference in the measured growth of employment.

In practice, however, those factors do not appear to account for much of the discrepancy. The CPS measure that is most comparable to the establishment survey (nonagricultural wage and salary workers excluding private household employees) rose by 14.8 million, or 1.5 percent annually, during the 1990s, virtually the same as the overall CPS figure. And the simplest way to adjust for the methodological changes to the CPS actually increases the discrepancy in employment growth from 4.7 million to about 4.9 million.[8] The impact of multiple job-holding is harder to evaluate, since consistent data have been available only since 1994, but that difference between the sur-

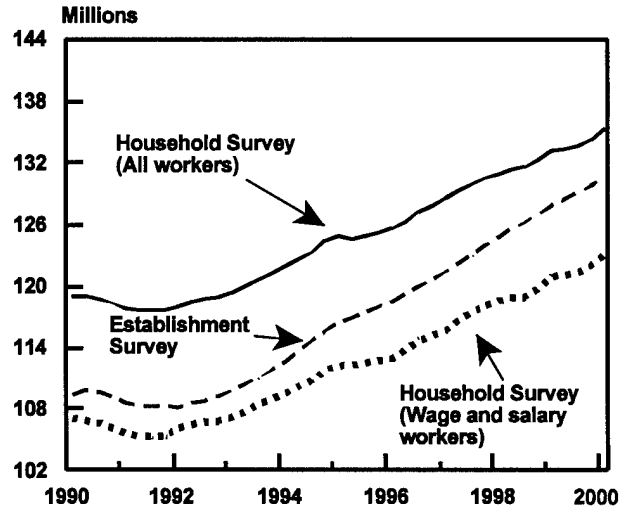
5. Leora Friedberg, "The Labor Supply Effects of the Social Security Earnings Test," *Review of Economics and Statistics*, vol. 82, no. 1 (February 2000), pp. 47-63.

6. The CPS is a joint program of the Census Bureau and BLS.

7. The labor force is defined as the total civilian noninstitutional population, so active-duty military personnel and people living in institutions are excluded from the official measures.

8. That adjustment assumes that the true seasonally adjusted change between December 1993 and January 1994 in the conceptually comparable CPS measure exactly matched the change in the establishment survey. Alternative calculations that apply estimated effects of changes in the CPS, as adapted from Polivka and Miller, "The CPS After the Redesign," reduce the discrepancy to around 3.9 million.

Figure A-9.
Alternative Measures of Employment, 1990-2000



SOURCE: Department of Labor, Bureau of Labor Statistics.

veys is unlikely to account for more than about 1 million of the overall discrepancy.

Part of the discrepancy could reflect a decline in underground (off-the-books) employment, resulting in more complete reporting of jobs to state UI agencies. However, that hypothesis cannot be easily tested in the absence of data on the underground economy. Reductions in marginal tax rates since 1980 may have induced greater reporting of jobs by reducing the incentive to hide income. But the growth in demand for services relative to goods would tend to promote more-rapid expansion of the underground economy. On balance, such effects probably do not explain much of the discrepancy.

Sources of Understatement in Employment Estimates

Underestimated population growth remains a likely explanation for most of the difference in growth rates between the two measures of employment. Population figures for 1990 are closely linked to that year's census (with an adjustment for the estimated undercount included). But until the results of the 2000 census are tabulated and any new undercount adjustment applied, estimates of the civilian noninstitutional population since 1990 must rely on available information about births, deaths, and net immigration. The immigration figures could be subject to considerable error, since accurate counts based on complete administrative records exist only for people legally admitted as permanent residents or refugees. Levels of undocumented immigration, emigration (among both legal residents and undocumented immigrants), and movement between the United States and Puerto Rico and the outlying territories must be estimated from indirect evidence.[9]

Undocumented immigration is especially likely to be a source of error. The Census Bureau assumes that such immigration (net of emigration among the undocumented) has maintained a constant level of 225,000 per year in recent years. However, the Immigration and Naturalization Service estimated net undocumented immigration at 275,000 per year between 1992 and 1996. Even that higher figure may be too low, especially for recent years, when high wages and abundant employment opportunities have made the U.S. labor market especially attractive to prospective immigrants.

If estimates of population growth have indeed been understated since 1990, the official estimate of the size of the civilian noninstitutional population (and thus the labor force) for 1999 is likely to increase significantly once the results of the 2000 census are incorporated. Ample precedent exists for such a revision. After the 1970 census, the Census Bureau raised its estimate of the civilian noninstitutional population by about 800,000 (relative to the pretabulation estimate for that year), and BLS raised its estimates of both the labor force and actual civilian employment by approximately 400,000. The adjustments that followed the 1980 census were considerably larger: about 3.3 million (2 percent) to the overall population in 1979, 2.1 million to the labor force, and 1.9 million to employment.[10] Estimates based on the 1990 census

9. Natives of Puerto Rico and the outlying territories are considered U.S. citizens and are free to move between those areas and the United States without restriction or any form of processing by the Immigration and Naturalization Service. However, residents of those areas are not counted in the U.S. population.

10. In contrast with the adjustments based on the 1970 and 1990 censuses, which generated breaks in the data series now in use, this change was introduced in 1982 and extrapolated back to 1970 at a roughly constant rate, yielding series that were continuous over this period.

were introduced in January 1994 (along with the methodological changes to the CPS) and subsequently extrapolated back to 1990. That change, along with a 1986 adjustment that reflected updated assumptions about immigration, raised estimates of the overall population and the labor force by about 1.5 million, employment by about 1.2 million, and the unemployment rate by 0.1 percentage point.

An adjustment to the current population estimate that was comparable (in percentage terms) to that of 1980 would imply an upward revision of 2.5 million to 3 million in the size of the labor force in 1999, or 0.2 to 0.25 percentage points in the average annual growth rate of the labor force since 1990. That magnitude is similar to the unexplained difference in growth between the two measures of employment. Aside from any adjustment to *past* growth rates and current labor force levels, that potential for revision also raises the possibility that CBO's projection for *future* growth in the labor force may be too low. The Census Bureau's and SSA's projections of population growth, on which CBO and other forecasters base their projections of labor force growth, reflect assumptions about immigration that are similar to those that underlie the Census Bureau's estimates of the current population.

CBO's current projections for the labor force do not account for any adjustment to the size of the population. Adjusting the 1999 population and labor force levels would not directly affect CBO's projections for output. But if population growth over the past 10 years has been underestimated, the current SSA and Census Bureau projections of future population growth may also be too low. To give an idea of the effect of different assumptions, a rate of growth in the labor force that was higher by just 0.1 percentage point would add about 1.7 million to the projected size of the labor force by 2010. Whether that means the projected future level of potential output is understated is not clear; that projection depends most closely on the employment figures from the establishment survey, which are not in question. However, because those figures are projected with an eye to the labor force projections, uncertainty about the current size and future growth of the population adds to uncertainty about the growth of output over the next decade.

Appendix B

Evaluating CBO's Record of Economic Forecasts

Since publishing its first macroeconomic forecast in 1976, the Congressional Budget Office (CBO) has compiled a forecasting track record comparable in quality with those of a sizable sample of private-sector forecasters as well as five Administrations. CBO's errors for two-year forecasts made between 1982 and 1998 did not differ markedly either from those of the Administration or from the average of the 50 or so forecasts that have made up the *Blue Chip* survey over the years. Comparing CBO's forecasts with those of the *Blue Chip* suggests that when CBO's economic predictions missed the mark by a margin wide enough to contribute to sizable misestimates of the deficit or surplus, those errors probably reflected limitations that confronted all forecasters. That result is not surprising because all forecasters, when making their predictions, have the same basic information available about the state of the economy, which they may then interpret differently. Moreover, CBO examines other forecasts when constructing its own; in turn, CBO's forecast may affect others in a similar way.

Overview

For forecasts looking two years ahead—those that are most important for the budget year being considered by the Congress—CBO has been slightly more accurate than the various Administrations over the past two decades (see Table B-1 on page 58). The differences between the two forecasters are small, however, especially when compared with the size of the forecast errors. Furthermore, for the last five two-year forecasts, there has been virtually no difference in overall forecast accuracy between CBO and the Administration. Also, CBO's forecasts have been about as accurate as the *Blue Chip*'s average forecasts.

For longer-run budget planning, the accuracy of five-year forecasting is important. CBO's errors in five-year projections of growth rates for real (inflation-adjusted) and nominal (current-dollar) output were similar to those of the various Administrations and the *Blue Chip* consensus. For projections made between 1976 and 1995, CBO's record is slightly better than the Administration's for real growth and better than the *Blue Chip*'s for growth of nominal output, but the *Blue Chip* projected real growth slightly better in the 1990s.

CBO's errors in forecasting real growth over the long run have alternated between periods of optimism and pessimism. The five-year forecasts produced during the late 1970s turned out to be too optimistic, averaging about 2 percentage points a year too high. Forecasts from the early 1980s, in contrast, were too pessimistic by a little less than half a percentage point. Those from the late 1980s were overly optimistic again, and, most recently, the projections made between 1992 and 1995 have been too pessimistic by about half a percentage point. (The five-year forecast from January 1995 is the most recent one that can be compared with actual results.)

As the track record shows, forecasters collectively tend to err during periods that include either turning points in the business cycle or significant shifts in major economic trends. For example, most forecasters overestimated the economy's growth rate and underestimated inflation in forecasts they made just before and during the back-to-back recessions of the early 1980s. That pattern was repeated, albeit to a lesser degree, in the forecasts they made just prior to the more moderate recession of the early 1990s. In addition, during the middle to late 1970s, forecasters continued to assume that the productivity trend of the previous two decades would prevail. In retrospect, however, the productivity trend of the 1970s and 1980s was significantly lower than that of the 1950s and 1960s. Because forecasters in the 1970s felt that the previous trend would reassert itself, their forecasts of real output in the middle to late 1970s turned out to be too optimistic.

Recent years may turn out to be a mirror image of the experience of the late 1970s. Partly because they underestimated the trend rate of productivity growth since 1996, forecasters underpredicted the economy's growth rate and overpredicted the rate of inflation. To be sure, as the economy has continued to outperform expectations, analysts have put more effort into investigating the possible causes of the increase in productivity growth. Those investigations have focused on the possible contribution of the "new economy"—especially the better flow of information among producers and between producers and consumers that has permitted improved productivity, lower inventories, and greater customer satisfaction. However, it is too soon to draw unambiguous conclusions about the role of the new economy from the historical evidence. Because the phenomenal recent economic performance is not yet fully understood, the uncertainty about the next few years may be larger than indicated by the average errors of the past two decades.

CBO has also underestimated taxable income in recent years, which in turn has contributed to revenue projections far below what actually occurred. However, underestimates of real growth were not the major reason. In the projections of nominal values, such as output and taxable income, the errors in forecasting real growth were offset by errors in forecasting inflation. Projections of taxable income were pessimistic not because projections of nominal output were too low but because the projected relationship of taxable income to output—the taxable-income share—was too low. Income categories in the national income and product accounts that are used for projecting revenues, primarily book profits and wages and salaries, grew much more rapidly between 1995 and 1999 than did nominal output, and the forecasts failed to anticipate that increase in the taxable-income share of output.

Sources of Data for the Evaluation

Evaluating CBO's forecasting record requires compiling the basic historical and forecast data for growth in nominal and real output, inflation in the consumer price index (CPI), interest rates, and taxable income. Although each of those data series has an important influence on budget projections, an accurate forecast of the two-year average growth in real output is the critical economic factor in accurately estimating the deficit or surplus for the upcoming budget year. The data were compiled using forecasts published early in the years from 1976 through 1998. (Two-year average forecasts published in early 1999 and 2000 could not be included in this evaluation because actual values for 2000 are not yet available.)

Selection of Historical Data

Which historical data to use for the evaluation was dictated by the availability of actual data and the nature of the individual forecasts examined. Although CBO, the Administration, and *Blue Chip* all published the same measure for real output growth, selecting a historical series was difficult because of periodic benchmark revisions in the actual data.[1] By comparison, not all of the forecasters published the same measures for CPI inflation and interest rates, but the selection of historical data for those series was clear-cut.

1. Before 1992, CBO, the Office of Management and Budget, and the *Blue Chip* consensus survey used gross national product to measure output. Beginning in early 1992, however, all three forecasters began to publish forecasts and projections of gross domestic product instead.

Growth in Real and Nominal Output. Historical two-year averages of growth in real output were developed from calendar year averages of the quarterly chain-type annual-weighted indexes of real gross national product (GNP) and real gross domestic product (GDP) published by the Bureau of Economic Analysis (BEA). The fact that several real GNP and GDP series were discontinued because of periodic benchmark revisions meant that they were unsuitable historical series. For example, during the 1976-1985 period, the three forecasters published estimates for a measure of growth in real GNP that was based on 1972 prices, which was the measure published by BEA at that time. In late 1985, however, BEA discontinued the 1972-dollar series and began to publish GNP on a 1982-dollar basis. As a result, an official series of values for GNP growth in 1972 dollars is not available for the years after 1984, and actual two-year average growth rates are not available to compare with the forecasts made in early 1984 and 1985.

From 1986 to 1991, forecasters published estimates of growth in real GNP based on 1982 prices. BEA revised the benchmark again in the second half of 1991; it discontinued the 1982-dollar GNP and began to publish GNP on a 1987-dollar basis.[2] Consequently, the historical annual series for 1982-dollar GNP is available only through 1990, and actual two-year average growth rates are not available for the forecasts made in early 1990 and 1991. The forecasters then published estimates of growth in real GDP on a 1987-dollar basis until 1995, when BEA made another switch, late in the year, to a chain-weighted measure of GDP. Therefore, the historical annual series for 1987-dollar GDP ends with the 1994 annual value, and actual two-year average growth rates are not available for the forecasts made in early 1994 and 1995.

By periodically updating the series to reflect more recent prices, BEA's benchmark revisions yield a measure of real output that is more relevant for analyzing contemporary movements in real growth. But the process makes it difficult to evaluate forecasts of real growth produced over a period of years for series that are later discontinued. This comparison avoids the difficulties presented by periodic revisions of the data by using one of BEA's alternative measures of real GNP and GDP, the chain-type annual-weighted index.[3]

Historical two-year averages for growth of nominal GNP and GDP were developed from calendar year averages of the quarterly values published by BEA.

CPI Inflation. Two-year averages of inflation in the consumer price index were calculated from calendar year averages of monthly data published by the Bureau of Labor Statistics. Before 1978, the bureau published only one consumer price index series, now known as the CPI-W (the price index for urban wage earners and clerical workers). In January 1978, however, it began to publish a second, broader consumer price index series, the CPI-U (the price index for all urban consumers). CBO's comparison of forecasts uses both series.

Until 1992, the Administration published its forecasts for the CPI-W, the measure used to index most of the federal government's spending for entitlement programs. In contrast, for all but four of its forecasts since 1979 (1986 through 1989), CBO based its inflation forecast on the CPI-U, a more widely cited measure of inflation and the one now used to index federal income tax brackets. The *Blue Chip* consensus has always published its forecast for the CPI-U. Although both the CPI-U and CPI-W may be forecast with the same relative ease, and annual fluctuations in the two series are virtually indistinguishable, they differ in some years. For that reason, CBO used historical data for both series to evaluate the alternative forecasting records.

Interest Rates. Two-year averages of nominal short- and long-term interest rates were calculated from monthly data published by the Board of Governors of the Federal Reserve System.

The forecasts of short-term interest rates were compared using historical values for two measures of the interest rate on three-month Treasury bills: the new-issue rate and the secondary-market rate. The

2. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.

3. For a discussion of that index, see Congressional Budget Office, *The Economic and Budget Outlook: An Update* (August 1995), pp. 71-73.

Administration forecasts the new-issue rate, which corresponds to the price of three-month bills auctioned by the Treasury Department—that is, it reflects the interest actually paid on that debt. CBO forecasts the secondary-market rate, which corresponds to the price of the three-month bills traded outside the Treasury auctions. Because such transactions occur continually in markets that involve many more traders than do Treasury auctions, the secondary-market rate provides an updated evaluation of short-term federal debt by the wider financial community. *Blue Chip* has alternated between those two rates; it published the new-issue rate from 1982 to 1985, switched to the secondary-market rate during the 1986-1991 period, and then returned to the new-issue rate in 1992. Clearly, there is no reason to expect the two rates to differ persistently; indeed, the differences between their calendar year averages are minuscule.

CBO likewise compared the various forecasts of long-term interest rates using historical values for two measures of long-term rates: the 10-year Treasury note rate and Moody's Aaa corporate bond rate. A comparison of forecasts is not possible before 1984 because not all of the forecasters published projections of long-term interest rates before that year. For forecasts made in early 1984 and 1985, CBO projected the Aaa corporate bond rate. Beginning with its early 1986 forecast, however, CBO switched to the 10-year Treasury note rate. The Administration has always published its projection for the 10-year Treasury note rate, but *Blue Chip* has published the Aaa corporate bond rate.

CBO calculated separate historical values for real short-term interest rates using the nominal short-term interest rate and inflation rate appropriate for each forecaster. In each case, the two-year average nominal interest rate was discounted by the two-year average rate of inflation. The resulting real short-term interest rates were very similar. Because there is no agreed-upon method for calculating real long-term interest rates, they were not included in the evaluation.

Taxable Income. Through its direct influence on projections for federal revenues, the forecast for taxable income plays a critical role in determining the accuracy of budget projections. The income measure examined here—wage and salary distributions plus the book value of corporate profits—combines the two sources of income to which tax receipts are most sensitive. Considering wages and profits together is appropriate because the effective rates of taxation on wages (including payroll and income taxes) and corporate profits are nearly the same and because those tax rates exceed the rate at which other income sources (such as interest income) are taxed.

Although the level of taxable income is the factor that most directly affects federal revenues, historical estimates of that level are subject to substantial statistical revision. As a result, using the *level* of taxable income would distort the comparison of forecasts. Instead, the forecasts are presented here as *changes* in taxable income as a share of total income; the historical revisions, carried forward consistently to projections, should not affect projections of revenues. Moreover, the change in taxable income as a share of total income is closer to the concept that macroeconomists consider when they construct their forecasts.

Sources of Forecast Data

For everything except taxable income, this evaluation used the calendar year forecasts and projections that CBO has published early each year since 1976, timed to coincide with the publication of the Administration's budget proposals. The Administration's forecasts were taken from its budget in all but one case: the forecast made in early 1981 came from the Reagan Administration's revisions of President Carter's last budget. The corresponding CBO forecast was taken from CBO's published analysis of President Reagan's budget proposals. That forecast did not include the economic effects of the new Administration's fiscal policy proposals.[4]

The average two-year forecasts in the *Blue Chip* consensus survey, which are published monthly, were taken from those published in the same month as CBO's forecasts. Because the *Blue Chip* consensus did not begin publishing its two-year forecasts until the middle of 1981, the first one available for this comparison was published in early 1982. Average five-year projections, however, are published by *Blue*

4. Another exceptional case occurred in early 1993, when the Clinton Administration adopted CBO's economic assumptions as the basis for its budget. As a result, the errors for the early 1993 forecast are the same for CBO and the Administration.

Chip only two or three times a year. All but one of its five-year projections used in this evaluation were published in March; the 1980-1984 projection was published in May.

Some of the CBO forecasts for wages, salaries, and corporate profits that are used here were not published in CBO's annual reports. Instead, they were taken from CBO's files of unpublished forecasts. CBO has published wage and salary forecasts regularly since 1985 but has published forecasts for book profits only in recent reports.

Measuring the Quality of Forecasts

Like earlier studies of economic forecasts, this evaluation focused on two aspects of the quality of CBO's forecasts: statistical bias and accuracy. Other desirable characteristics—such as the efficiency of a forecast, which is discussed later—are harder to assess definitively and would require a larger sample than is available for CBO's forecasts.

Bias

The statistical bias of a forecast is the extent to which the forecast can be expected to differ from what actually occurs. CBO's evaluation used the *mean error* to measure statistical bias. That statistic—the arithmetic average of all the forecast errors—is the simplest and most widely used measure of forecast bias. Because the mean error is a simple average, however, underestimates and overestimates offset each other in calculating it. As a result, the mean error imperfectly measures the quality of a forecast—a small mean error would result either if all the errors were small or if all the errors were large but the overestimates and underestimates happened to balance each other out.

Accuracy

The accuracy of a series of forecasts is the degree to which their values are narrowly dispersed around actual outcomes. Measures of accuracy more clearly reflect the usual meaning of forecast quality than does the mean error. CBO's evaluation used two measures of accuracy. The *mean absolute error*—the average of the forecasts' errors without regard to arithmetic sign—indicates the average distance between forecasts and actual values without regard to whether individual forecasts are overestimates or underestimates. The *root mean square error*—calculated by first squaring all the errors, then taking the square root of the arithmetic average of the squared errors—also shows the size of the error without regard to sign, but it gives greater weight to larger errors.

Other Measures of Forecast Quality

The three statistical indicators described above are not the only measures of a forecast's quality. Studies by analysts outside CBO have used measures that are slightly more elaborate than the mean error to test for statistical bias in CBO's forecasts. Those studies have generally concluded, as does this evaluation, that CBO's short-term economic forecasts do not contain a statistically significant bias.[5]

A number of other methods have been developed to evaluate a forecast's "efficiency." Efficiency indicates the extent to which a particular forecast could have been improved by using additional information that was available to the forecaster when the forecast was made.[6] The *Blue Chip* consensus forecasts repre-

5. Another approach to testing a forecast for bias is based on linear regression analysis of actual and forecast values. For details of that method, see J. Mincer and V. Zarnowitz, "The Evaluation of Economic Forecasts," in J. Mincer, ed., *Economic Forecasts and Expectations* (New York: National Bureau of Economic Research, 1969). That approach is not used here because of the small size of the sample. However, previous studies that have used it to evaluate the short-term forecasts of CBO and the Administration have not been able to reject the hypothesis that those forecasts are unbiased. See, for example, M.T. Belongia, "Are Economic Forecasts by Government Agencies Biased? Accurate?" *Review*, Federal Reserve Bank of St. Louis, vol. 70, no. 6 (November/December 1988), pp. 15-23. For a more recent and more elaborate study of forecast bias that included CBO's forecasts among a sizable sample, see David Laster, Paul Bennett, and In Sun Geoum, *Rational Bias in Macroeconomic Forecasts*, Staff Report No. 21 (New York: Federal Reserve Bank of New York, March 1997).

6. For studies that have examined the relative efficiency of CBO's economic forecasts, see Belongia, "Are Economic Forecasts by Government Agencies Biased?"; and S.M. Miller, "Forecasting Federal Budget Deficits: How Reliable Are U.S. Congressional Budget Office Projections?" *Applied Economics*, vol. 23 (December 1991), pp. 1789-1799. Although both studies identify series that might have been used to make CBO's forecasts more accurate, they rely on statis-

sent a wide variety of economic forecasters and thus reflect a broader blend of sources and methods than can be expected from any single forecaster. In this evaluation, the *Blue Chip* predictions can therefore serve as a proxy for an efficient forecast. The fact that CBO's forecasts are about as accurate as the *Blue Chip*'s is a rough indication of their efficiency.

Such elaborate measures and methods, however, are not necessarily reliable indicators of a forecast's quality when the sample of observations is small, such as the 23 observations that make up the sample of CBO's two-year forecasts. Small samples present three main problems for evaluating forecasts. First, they reduce the reliability of statistical tests that are based on the assumption that the underlying population of errors in the forecast follows a normal distribution. The more elaborate measures of forecast quality all make such an assumption about the hypothetical ideal forecast with which the actual forecasts are being compared. Second, in small samples, individual errors in a forecast can have an unduly large influence on the measures. The mean error, for example, can fluctuate in its arithmetic sign when a single observation is added to a small sample. Third, the small sample means that CBO's track record cannot be used in a statistically reliable way to indicate either the direction or the size of future forecasting errors.

Apart from the general caveat that should attend any statistical conclusions, there are several reasons for viewing any evaluation of CBO's forecasts with particular caution. First, the procedures and purposes of CBO's and the Administration's economic forecasts have changed over the past two decades and may change again. For example, in the late 1970s, CBO characterized its long-term projections as a goal for the economy; it now considers them to be a projection of what will prevail, on average, if the economy continues to reflect historical trends. Unlike CBO's projections, the Administration's have always included the projected economic effects of its own policy proposals. Second, an institution's track record in forecasting may not indicate its future abilities because of changes in personnel or methods. Finally, errors in a forecast increase when the economy is more volatile and when economic trends change. All three groups of forecasters—CBO, the Administration, and the *Blue Chip* survey—made exceptionally large errors when forecasting for periods that included turning points in the business cycle and for the past few years, when the sustainable growth of the economy apparently increased.

tics that assume a larger sample than is available. Moreover, although statistical tests can identify sources of inefficiency in a forecast after the fact, they generally do not indicate how such information can be used to improve forecasts when they are being made.

CBO's Forecasting Record

This analysis evaluates the Congressional Budget Office's macroeconomic forecasts over two-year and five-year periods. Because the budget reports that the Administration and CBO publish each winter focus on budget projections for the fiscal year that begins in the following October, an economic forecast that is accurate not only for the months leading up to that budget year but also for the budget year itself will provide the basis for a more accurate forecast of the budget's bottom line—hence the interest in the two-year period. The five-year period is used to examine the accuracy of longer-term projections of growth in real and nominal output.

This analysis does not consider how errors in the economic forecast affect budget projections. Rules of thumb for estimating the effects of changes in various macroeconomic variables appear in Appendix C of CBO's *The Budget and Economic Outlook: Fiscal Years 2001-2010* (January 2000).

Short-Term Forecasts

Historically, the Congressional Budget Office's two-year forecasts are slightly more accurate than the Administration's and suffer from slightly less statistical bias. In most cases, however, the differences are small. Moreover, CBO's forecasts are about as accurate as the *Blue Chip*'s average forecasts.

Growth in Real Output. For the two-year forecasts made between 1976 and 1998, CBO had a slightly better record than the Administration in predicting growth in real output (see Table B-2). CBO was closer to the actual value in 11 of the 23 forecasts

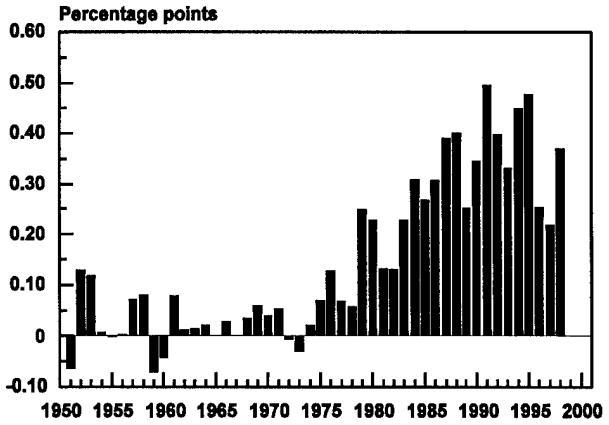
made between 1976 and 1998, the Administration was closer in eight periods, and the two had identical errors in four periods. CBO's predictions of real growth made between 1982 and 1998 were, on average, as accurate as those of the *Blue Chip* consensus.

As noted earlier, forecast errors tend to be larger during periods of economic turmoil or upheaval. That tendency can clearly be seen in the forecasts of real output growth by comparing the large errors for 1979 through 1983 —when the economy went through its most turbulent recessionary period of the postwar era—with the smaller errors recorded for later years. Similarly, the business cycle accounts for the large errors in the predictions made in the 1989-1991 period; during that time, the Congressional Budget Office's errors were only slightly larger than those of the *Blue Chip* consensus.

All three forecasters underpredicted two-year real GDP growth in every year since 1992. Much of that apparent pessimism, however, results from recent revisions in the national income and product accounts; the BEA benchmark revisions published in November 1999 increased the two-year growth rates for real GDP for most of the historical period, especially the past two decades (see Figure B-1). The upward revision in growth rates stemmed largely from including software spending as investment in the accounts as well as adopting new price series for various categories of consumption. In addition to making the mean forecast error less informative, those revisions distort the reliability of the statistical measures of accuracy. Nevertheless, even after accounting for the latest revisions, the underpredictions of economic growth since 1996 appear significant.

Growth in Nominal Output. The records of CBO and the Administration in forecasting two-year growth in nominal output are quite similar (see Table B-3). On average, both CBO and the Administration turned out to be somewhat high in their forecasts. Of the 23 forecasts made between 1976 and 1998, the Administration recorded the smaller error 12 times, CBO had the smaller error 10 times, and the two forecasters recorded identical errors once. CBO's mean errors and root mean square errors for that period are slightly smaller than the Administration's.

Figure B-1.
The Effects of Revisions on the Two-Year Average Growth Rate for Real GDP



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: The effects shown are the differences between the two-year average growth rates from the revised data for real gross domestic product (GDP) and the two-year average growth rates from the previously available data for real GDP.

Over the shorter interval between 1982 and 1998, the bias and accuracy of CBO's forecasts of two-year growth in nominal output are nearly identical to those of the *Blue Chip* consensus.

CPI Inflation. CBO and the Administration also had very similar records for forecasting the two-year average growth in the consumer price index (see Table B-4). Both underestimated future inflation in their forecasts for 1977 through 1980 and overestimated it for 1981 through 1986. Their average measures of bias and accuracy were virtually identical. CBO was closer to the actual value in seven of the 23 periods, the Administration was closer in 11 periods, and the two forecasts had matching errors in five periods. For the 1982-1998 period, CBO's forecasts of inflation were as accurate as those of the Administration and *Blue Chip*.

Nominal Interest Rates. For the 1976-1998 forecasts, CBO's record was about as accurate as the Administration's for nominal short-term interest rates over a two-year period (see Table B-5). On average, the Administration tended to underestimate those rates, whereas CBO's mean error was zero over that period.

CBO and the Administration were each closer to the actual value in 11 of the 23 periods and had identical errors in one period. Between 1982 and 1998, however, the root mean square error of CBO's forecasts was slightly above those of the Administration and *Blue Chip*, meaning that CBO made a few relatively large errors (such as those in 1982, 1983, and 1991).

For the 1984-1998 forecasts of long-term interest rates, CBO did somewhat better than the Administration (see Table B-6). The Administration tended to underestimate rates, and its mean error was slightly larger than CBO's. In addition, the Administration's forecasts were less accurate on average than CBO's. CBO was closer to the true value in 10 of the 15 periods, the Administration was closer in four periods, and the two forecasters had identical errors in one period.

The Congressional Budget Office's forecasts of long-term interest rates were about as accurate as those of the *Blue Chip* consensus. Both CBO and *Blue Chip* tended to overestimate long-term rates. CBO had a mean error of 0.2 percentage points compared with 0.1 percentage point for *Blue Chip*.

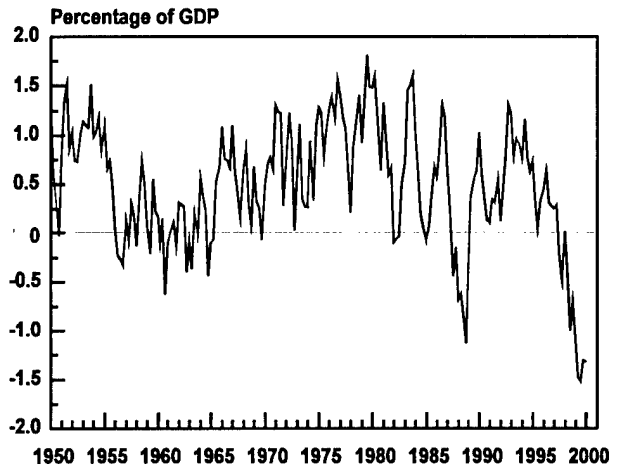
Real Short-Term Interest Rates. For the forecasts made in 1976 through 1998, CBO had a slight edge over the Administration in estimating short-term interest rates adjusted for inflation (see Table B-7). Again, the Administration was more likely than CBO to underestimate interest rates. Both forecasters recorded similar mean absolute and root mean square errors. CBO's forecasts were closer to the actual value in 13 of the 23 periods, the Administration's were closer in eight, and the two registered identical errors in two periods. For forecasts made between 1982 and 1998, CBO's errors were generally similar in both direction and magnitude to those of the *Blue Chip* consensus.

Taxable Income. One of the greatest sources of error in budget projections is error in forecasting taxable income. On average, both CBO and the Administration have been too optimistic in their projections of the major components of taxable income, wages, salaries and corporate profits (see Table B-8). In recent years, however, both CBO and the Administration have significantly underestimated the growth of wages and profits relative to output. Apart from the usual difficulties associated with forecasting corporate profits, two other factors contribute to the misestimates.

The first is the degree to which total income has exceeded total product in the national income and product accounts (NIPAs). In principle, those two aggregate measures of economic activity should be equal, but in practice they are not, largely because the Bureau of Economic Analysis, which publishes the NIPAs, must use different primary sources to estimate total income, on the one hand, and total product, on the other. The statistical discrepancy in the NIPAs measures the difference between total product and total income; in recent years, the excess of total income over total product has grown, and it gives no indication of decreasing (see Figure B-2).

The widening of that discrepancy presents a problem for forecasters. If they have assumed, in line with historical experience, that the discrepancy will revert toward zero and that it mainly results from mismeasurements on the income side, they will have been more apt to understate income in recent years. At this point, it is impossible to tell exactly how much the discrepancy has caused forecasters to err in their forecasts of income, but the sheer size of the imbalance in recent years compounds the importance of each forecaster's assumptions about how to predict the discrepancy. Forecasters' use of alternative and mutually exclusive assumptions for resolving that imbalance—

Figure B-2.
Statistical Discrepancy in the National Income and Product Accounts

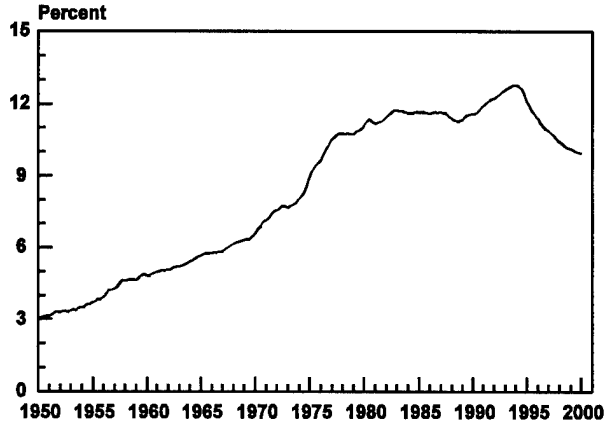


SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

each assumption as reasonable as the next—could broaden the dispersion of forecasts of total income in coming years.

A second source of difficulty in forecasting taxable income as a share of output in the last half of the 1990s was the reversal of another long-standing trend. Throughout the postwar period, nonwage labor income rose as a share of total labor compensation, a trend that many analysts believe reflects an increased tendency by employers to substitute fringe benefits (such as employer-paid insurance premiums and pension contributions) for wages and salaries as a means of compensating their workforce. But beginning in 1995, that trend appears to have reversed (see Figure B-3). Because nonwage labor income is not taxed, the decline in its share of total labor compensation has had the effect of increasing the share of compensation that is taxed (namely, wages and salaries). That turnaround was relatively unpredictable and as yet is imperfectly understood. However, one important component of nonwage labor income—employers' health insurance premiums—has recently begun to grow faster than wages. Thus, the future trend in nonwage labor income is again likely to be upward.

Figure B-3.
Nonwage Labor Income as a Share of Total Labor Compensation



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Longer-Term Projections

In projecting real growth for the more distant future, measured here as five years ahead, the Administration's errors were larger than CBO's (see Table B-9). Although that comparative advantage for CBO does not directly affect the estimates of the surplus for the budget year, accuracy in the longer term is obviously important for budgetary planning over several years. Neither the Administration nor CBO, however, considers its projections to be its best guess about the year-to-year course of the economy. The Administration's projections each year are based on the adoption of the President's budget as submitted, and for most years CBO has considered its projections an indication of the average future performance of the economy if major historical trends continue. Neither institution attempts to anticipate cyclical fluctuations in the projection period.

CBO's projections of longer-term growth in real output were closer to the actual values than the Administration's were in 13 of the 20 forecasts. The Administration's projections showed an upward bias of 0.7 percentage points compared with an upward bias of 0.3 percentage points for CBO. Those biases occurred largely because the projections made in early 1976 through 1979, which CBO and the Administration presented as target rates of growth, did not incorporate the recessions of 1980 and 1982. Through the subsequent years of expansion until the most recent recession, the upward bias was much smaller for the Administration's projections and even smaller for CBO's. Since 1992, both CBO and the Administration have underpredicted long-term growth. The reasons are the surprisingly strong economy of the late 1990s and, to a lesser extent, the upward revisions to BEA's estimates of the rate of growth.

The recent underpredictions of real growth, however, have not generally resulted in underestimates of long-run growth in nominal output (see Table B-10). That is because most forecasters have overestimated the inflation rate in recent years. Since 1976, CBO and the Administration appear to have done equally well in forecasting five-year growth in nominal output. Moreover, as the record since 1982 shows, both forecasters compared well with the *Blue Chip* consensus.

Table B-1.
Summary Measures of Forecast Performance (In percentage points)

	CBO	Administration	*Blue Chip*
Two-Year Averages			
Growth Rate for Real Output (1982-1998)			
Mean error	-0.4	-0.2	-0.5
Mean absolute error	0.8	0.9	0.8
Root mean square error	1.0	1.2	1.0
Growth Rate for Nominal Output (1982-1998)			
Mean error	0.4	0.6	0.4
Mean absolute error	1.0	1.1	1.0
Root mean square error	1.3	1.5	1.2
Inflation Rate in the Consumer Price Index (1982-1998)			
Mean error	0.7	0.6	0.7
Mean absolute error	0.8	0.9	0.9
Root mean square error	1.0	1.1	1.1
Nominal Interest Rate on Three-Month Treasury Bills (1982-1998)			
Mean error	0.4	-0.1	0.4
Mean absolute error	1.0	0.9	0.9
Root mean square error	1.3	1.1	1.1
Nominal Long-Term Interest Rates (1984-1998)			
Mean error	0.2	-0.3	0.1
Mean absolute error	0.6	0.9	0.7
Root mean square error	0.7	1.0	0.8
Real Interest Rate on Three-Month Treasury Bills (1982-1998)			
Mean error	-0.3	-0.7	-0.4
Mean absolute error	0.9	0.9	0.8
Root mean square error	1.1	1.1	1.0
Change in Wage and Salary Disbursements Plus Corporate Book Profits as a Share of Output (1980-1998)			
Mean error	0.1	0.2	N.A.
Mean absolute error	1.0	0.9	N.A.
Root mean square error	1.2	1.2	N.A.
Five-Year Averages			
Growth Rate for Real Output (1979-1995)			
Mean error	0	0.4	-0.1
Mean absolute error	0.4	0.7	0.5
Root mean square error	0.7	0.9	0.6
Growth Rate for Nominal Output (1982-1995)			
Mean error	0.9	1.0	1.0
Mean absolute error	1.0	1.1	1.0
Root mean square error	1.1	1.2	1.2

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: The values reported here are derived from Tables B-2 through B-10.

N.A. = not available.

Table B-2.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Growth Rates for Real Output (By calendar year, in percent)

	Actual									
	1972 Dollars	1982 Dollars	1987 Dollars	Chain-Type Annual-Weighted Index	CBO Forecast	CBO Error	Administration Forecast	Administration Error	*Blue Chip* Forecast	*Blue Chip* Error
GNP										
1976-1977	6.7	4.8	4.8	5.2	6.2	1.0	5.9	0.8	a	a
1977-1978	5.2	5.0	4.7	5.1	5.5	0.4	5.1	0.1	a	a
1978-1979	3.9	3.9	3.8	4.5	4.7	0.3	4.7	0.3	a	a
1979-1980	1.3	1.1	1.1	1.6	2.7	1.1	2.9	1.3	a	a
1980-1981	1.1	0.9	0.5	1.0	0.5	-0.5	0.5	-0.5	a	a
1981-1982	0.2	-0.3	-0.4	0.1	2.1	2.0	2.6	2.5	a	a
1982-1983	0.7	0.5	0.7	1.1	2.1	1.1	2.7	1.6	2.0	1.0
1983-1984	5.2	5.2	4.9	5.7	3.4	-2.3	2.6	-3.0	3.5	-2.2
1984-1985	b	5.1	4.4	5.3	4.7	-0.6	4.7	-0.6	4.3	-1.0
1985-1986	b	3.0	2.8	3.3	3.3	0	3.9	0.6	3.2	-0.2
1986-1987	b	3.1	2.9	3.2	3.1	-0.1	3.7	0.5	3.0	-0.2
1987-1988	b	3.9	3.5	3.8	2.9	-0.9	3.3	-0.5	2.8	-0.9
1988-1989	b	3.5	3.3	3.9	2.4	-1.4	3.0	-0.9	2.1	-1.7
1989-1990	b	1.7	2.0	2.7	2.5	-0.2	3.2	0.5	2.2	-0.5
1990-1991	b	c	0.3	0.7	2.0	1.4	2.8	2.1	1.9	1.3
1991-1992	b	c	0.7	1.2	1.6	0.4	1.4	0.2	1.2	0
GDP[d]										
1992-1993	b	c	2.7	2.9	2.6	-0.3	2.2	-0.6	2.3	-0.5
1993-1994	b	c	3.6	3.3	2.9	-0.4	2.9	-0.4	3.0	-0.3
1994-1995	b	c	e	3.3	2.8	-0.5	2.9	-0.4	2.8	-0.5
1995-1996	b	c	e	3.1	2.4	-0.7	2.6	-0.5	2.6	-0.5
1996-1997	b	c	e	3.9	1.9	-2.0	2.2	-1.7	2.1	-1.8
1997-1998	b	c	e	2.7	2.1	-0.5	2.1	-0.6	2.2	-0.5
1998-1999	b	c	e	2.6	2.3	-0.3	2.2	-0.4	2.4	-0.2
Statistics for 1976-1998										
Mean error	*	*	*	*	*	-0.1	*	0	*	*
Mean absolute error	*	*	*	*	*	0.8	*	0.9	*	*
Root mean square error	*	*	*	*	*	1.0	*	1.2	*	*
Statistics for 1982-1998										
Mean error	*	*	*	*	*	-0.4	*	-0.2	*	-0.5
Mean absolute error	*	*	*	*	*	0.8	*	0.9	*	0.8
Root mean square error	*	*	*	*	*	1.0	*	1.2	*	1.0

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are for the two-year growth rates for real gross national product (GNP) and real gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Forecast values are for the average annual growth of real GNP or GDP over the two-year period. The forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate. The chain-type annual-weighted index of actual GNP or GDP was used in calculating the errors.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.
b. Data for 1972-dollar GNP and GDP are available only through the third quarter of 1985.
c. Data for 1982-dollar GNP and GDP are available only through the third quarter of 1991.
d. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.
e. Data for 1987-dollar GNP and GDP are available only through the second and third quarters, respectively, of 1995.

Table B-3.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Growth Rates for Nominal Output (By calendar year, in percent)

		CBO		Administration		*Blue Chip*	
	Actual	Forecast	Error	Forecast	Error	Forecast	Error
GNP							
1976-1977	11.6	13.1	1.6	12.3	0.7	a	a
1977-1978	12.2	10.8	-1.4	11.2	-1.0	a	a
1978-1979	12.5	10.9	-1.7	11.2	-1.4	a	a
1979-1980	10.5	11.0	0.5	10.4	-0.1	a	a
1980-1981	10.4	9.7	-0.7	9.5	-0.8	a	a
1981-1982	7.9	12.1	4.2	11.9	4.0	a	a
1982-1983	6.2	9.7	3.5	9.8	3.6	9.5	3.3
1983-1984	9.7	8.2	-1.5	8.0	-1.7	9.0	-0.8
1984-1985	8.9	9.9	0.9	9.6	0.7	9.6	0.7
1985-1986	6.1	7.6	1.5	8.2	2.1	7.4	1.3
1986-1987	5.9	7.1	1.2	7.7	1.8	6.7	0.8
1987-1988	7.1	6.5	-0.6	6.9	-0.3	6.4	-0.7
1988-1989	7.6	6.3	-1.3	6.8	-0.9	6.1	-1.5
1989-1990	6.7	6.8	0.1	7.1	0.4	6.6	-0.1
1990-1991	4.5	6.1	1.6	7.1	2.6	6.0	1.5
1991-1992	4.3	5.7	1.4	5.6	1.3	5.2	1.0
GDP[b]							
1992-1993	5.3	5.7	0.4	5.4	0.1	5.5	0.2
1993-1994	5.7	5.3	-0.3	5.3	-0.3	6.0	0.4
1994-1995	5.6	5.6	0	5.7	0.1	5.6	0.1
1995-1996	5.2	5.2	0	5.6	0.3	5.7	0.5
1996-1997	5.9	4.7	-1.2	5.1	-0.8	4.5	-1.4
1997-1998	3.8	4.6	0.7	4.7	0.9	4.6	0.8
1998-1999	3.4	4.5	1.1	4.2	0.8	4.5	1.1
Statistics for 1976-1998							
Mean error	*	*	0.4	*	0.5	*	*
Mean absolute error	*	*	1.2	*	1.2	*	*
Root mean square error	*	*	1.5	*	1.6	*	*
Statistics for 1982-1998							
Mean error	*	*	0.4	*	0.6	*	0.4
Mean absolute error	*	*	1.0	*	1.1	*	1.0
Root mean square error	*	*	1.3	*	1.5	*	1.2

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are for the two-year growth rates for gross national product (GNP) and gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Forecast values are for the average annual growth of nominal GNP or GDP over the two-year period. The forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

b. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.

Table B-4.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Inflation Rates in the Consumer Price Index (By calendar year, in percent)

	Actual		CBO		Administration		*Blue Chip*	
	CPI-U	CPI-W	Forecast	Error	Forecast	Error	Forecast	Error
1976-1977	6.1	6.1	7.1	1.0	6.1	0	a	a
1977-1978	7.0	7.0	4.9	-2.1	5.2	-1.8	a	a
1978-1979	9.4	9.5	5.8	-3.7	6.0	-3.5	a	a
1979-1980	12.4	12.5	8.1	-4.3	7.4	-5.0	a	a
1980-1981	11.9	11.9	10.1	-1.8	10.5	-1.4	a	a
1981-1982	8.2	8.1	10.4	2.1	9.7	1.6	a	a
1982-1983	4.6	4.5	7.2	2.6	6.6	2.1	7.2	2.6
1983-1984	3.8	3.3	4.7	1.0	4.7	1.5	4.9	1.1
1984-1985	3.9	3.5	4.9	1.0	4.5	1.0	5.2	1.3
1985-1986	2.7	2.5	4.1	1.4	4.2	1.7	4.3	1.6
1986-1987	2.8	2.6	3.8	1.2	3.8	1.2	3.8	1.0
1987-1988	3.9	3.8	3.9	0.1	3.3	-0.5	3.6	-0.2
1988-1989	4.4	4.4	4.7	0.3	4.2	-0.2	4.3	-0.1
1989-1990	5.1	5.0	4.9	-0.1	3.7	-1.3	4.7	-0.4
1990-1991	4.8	4.6	4.1	-0.7	3.9	-0.7	4.1	-0.7
1991-1992	3.6	3.5	4.2	0.6	4.6	1.1	4.4	0.8
1992-1993	3.0	2.9	3.4	0.5	3.1	0.2	3.5	0.5
1993-1994	2.8	2.7	2.8	0.1	2.8	0.1	3.3	0.6
1994-1995	2.7	2.7	2.8	0.1	3.0	0.3	3.0	0.3
1995-1996	2.9	2.9	3.2	0.4	3.1	0.3	3.4	0.6
1996-1997	2.6	2.6	2.9	0.3	2.9	0.3	2.8	0.2
1997-1998	1.4	1.3	2.9	1.5	2.7	1.3	2.9	1.6
1998-1999	1.0	0.9	2.3	1.4	2.1	1.2	2.4	1.4
Statistics for 1976-1998								
Mean error	*	*	*	0.1	*	0	*	*
Mean absolute error	*	*	*	1.2	*	1.2	*	*
Root mean square error	*	*	*	1.6	*	1.7	*	*
Statistics for 1982-1998								
Mean error	*	*	*	0.7	*	0.6	*	0.7
Mean absolute error	*	*	*	0.8	*	0.9	*	0.9
Root mean square error	*	*	*	1.0	*	1.1	*	1.1

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Labor, Bureau of Labor Statistics.

NOTES: Values are for the average annual growth of the consumer price index (CPI) over the two-year period. Before 1978, the Bureau of Labor Statistics published only one consumer price index series, now known as the CPI-W (the price index for urban wage earners and clerical workers). In January 1978, the bureau began to publish a second, broader consumer price index series, the CPI-U (the price index for all urban consumers). For most years since 1979, CBO forecast the CPI-U; from 1986 through 1989, however, CBO forecast the CPI-W. The Administration forecast the CPI-W until 1992, when it switched to the CPI-U. *Blue Chip* forecast the CPI-U for the entire period. The forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table B-5.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Nominal Interest Rates on Three-Month Treasury Bills (By calendar year, in percent)

	Actual		CBO		Administration		*Blue Chip*	
	New Issue	Secondary Market	Forecast	Error	Forecast	Error	Forecast	Error
1976-1977	5.1	5.1	6.2	1.1	5.5	0.4	a	a
1977-1978	6.2	6.2	6.4	0.2	4.4	-1.8	a	a
1978-1979	8.6	8.6	6.0	-2.6	6.1	-2.5	a	a
1979-1980	10.8	10.7	8.3	-2.4	8.2	-2.6	a	a
1980-1981	12.8	12.7	9.5	-3.2	9.7	-3.1	a	a
1981-1982	12.4	12.3	13.2	0.9	10.0	-2.4	a	a
1982-1983	9.7	9.6	12.6	3.0	11.1	1.4	11.3	1.6
1983-1984	9.1	9.1	7.1	-2.0	7.9	-1.1	7.9	-1.2
1984-1985	8.5	8.5	8.7	0.3	8.1	-0.4	9.1	0.5
1985-1986	6.7	6.7	8.5	1.8	8.0	1.3	8.5	1.8
1986-1987	5.9	5.9	6.7	0.9	6.9	1.0	7.1	1.2
1987-1988	6.2	6.2	5.6	-0.6	5.5	-0.7	5.7	-0.5
1988-1989	7.4	7.4	6.4	-0.9	5.2	-2.1	6.1	-1.2
1989-1990	7.8	7.8	7.5	-0.3	5.9	-1.9	7.5	-0.3
1990-1991	6.5	6.4	7.0	0.6	6.0	-0.4	7.1	0.7
1991-1992	4.4	4.4	6.8	2.4	6.2	1.8	6.4	2.0
1992-1993	3.2	3.2	4.7	1.5	4.5	1.3	4.6	1.4
1993-1994	3.6	3.6	3.4	-0.2	3.4	-0.2	3.8	0.2
1994-1995	4.9	4.9	3.9	-1.0	3.6	-1.3	3.6	-1.3
1995-1996	5.3	5.2	5.9	0.7	5.7	0.4	6.1	0.9
1996-1997	5.0	5.0	4.8	-0.2	4.7	-0.3	5.0	0
1997-1998	5.1	5.1	5.0	-0.1	4.8	-0.2	5.1	0.1
1998-1999	4.9	4.8	5.2	0.4	4.9	0.1	5.1	0.2
Statistics for 1976-1998								
Mean error	*	*	*	0	*	-0.6	*	*
Mean absolute error	*	*	*	1.2	*	1.3	*	*
Root mean square error	*	*	*	1.5	*	1.5	*	*
Statistics for 1982-1998								
Mean error	*	*	*	0.4	*	-0.1	*	0.4
Mean absolute error	*	*	*	1.0	*	0.9	*	0.9
Root mean square error	*	*	*	1.3	*	1.1	*	1.1

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Federal Reserve Board.

NOTES: Values are for the geometric averages of the three-month Treasury bill rates for the two-year period. The actual values are published by the Federal Reserve Board as the rate on new issues (reported on a bank-discount basis) and the secondary-market rate. CBO forecast the secondary-market rate; the Administration forecast the new-issue rate. *Blue Chip* alternated between the two rates, forecasting the new-issue rate from 1982 to 1985, the secondary-market rate from 1986 to 1991, and the new-issue rate again beginning in 1992. The forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table B-6.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Averages for Nominal Long-Term Interest Rates (By calendar year, in percent)

	Actual		CBO		Administration		*Blue Chip*	
	10-Year Note	Corporate Aaa Bond	Forecast	Error	Forecast	Error	Forecast	Error
1984-1985	11.5	12.0	11.9	-0.1	9.7	-1.8	12.2	0.2
1985-1986	9.1	10.2	11.5	1.3	10.6	1.5	11.8	1.7
1986-1987	8.0	9.2	8.9	0.9	8.7	0.7	9.9	0.8
1987-1988	8.6	9.5	7.2	-1.4	6.6	-2.0	8.7	-0.8
1988-1989	8.7	9.5	9.4	0.7	7.7	-1.0	9.8	0.3
1989-1990	8.5	9.3	9.1	0.6	7.7	-0.8	9.5	0.3
1990-1991	8.2	9.0	7.7	-0.5	7.2	-1.0	8.7	-0.3
1991-1992	7.4	8.5	7.8	0.4	7.3	-0.1	8.7	0.3
1992-1993	6.4	7.7	7.1	0.7	6.9	0.5	8.4	0.7
1993-1994	6.5	7.6	6.6	0.2	6.6	0.2	8.2	0.6
1994-1995	6.8	7.8	5.9	-0.9	5.8	-1.0	7.1	-0.7
1995-1996	6.5	7.5	7.3	0.8	7.5	1.0	8.6	1.1
1996-1997	6.4	7.3	6.2	-0.1	5.4	-0.9	6.2	-1.1
1997-1998	6.2	7.2	6.2	0	6.0	-0.2	6.4	-0.8
1998-1999	5.6	6.8	6.0	0.4	5.8	0.2	5.9	-0.8
Statistics for 1984-1998								
Mean error	*	*	*	0.2	*	-0.3	*	0.1
Mean absolute error	*	*	*	0.6	*	0.9	*	0.7
Root mean square error	*	*	*	0.7	*	1.0	*	0.8

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Federal Reserve Board.

NOTES: Actual values are for the geometric averages of the 10-year Treasury note rates or Moody's corporate Aaa bond rates for the two-year period as reported by the Federal Reserve Board. CBO forecast the 10-year Treasury note rate in all years except 1984 and 1985 when it forecast the corporate Aaa bond rate. The Administration forecast the 10-year note rate, but *Blue Chip* forecast the corporate Aaa bond rate. Data are only available beginning in 1984 because not all of the forecasters published long-term rate projections before then. The forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

Table B-7.
Comparison of CBO, Administration, and *Blue Chip* Forecasts of Two-Year Average Real Interest Rates on Three-Month Treasury Bills (By calendar year, in percent)

	Actual									
	New Issue		Secondary Market		CBO		Administration		*Blue Chip*	
	CPI-U	CPI-W	CPI-U	CPI-W	Forecast	Error	Forecast	Error	Forecast	Error
1976-1977	-0.9	-0.9	-0.9	-0.9	-0.8	0.1	-0.6	0.3	a	a
1977-1978	-0.8	-0.7	-0.8	-0.7	1.5	2.2	-0.8	-0.1	a	a
1978-1979	-0.7	-0.8	-0.7	-0.8	0.2	1.0	0.1	0.9	a	a
1979-1980	-1.4	-1.5	-1.4	-1.5	0.2	1.7	0.7	2.2	a	a
1980-1981	0.8	0.9	0.7	0.8	-0.5	-1.2	-0.7	-1.6	a	a
1981-1982	3.8	4.0	3.7	3.9	2.6	-1.2	0.3	-3.7	a	a
1982-1983	4.8	4.9	4.7	4.9	5.0	0.3	4.2	-0.8	3.8	-1.0
1983-1984	5.1	5.7	5.1	5.6	2.2	-2.9	3.1	-2.6	2.9	-2.3
1984-1985	4.4	4.9	4.4	4.8	3.6	-0.8	3.4	-1.4	3.6	-0.8
1985-1986	3.9	4.1	3.9	4.1	4.2	0.3	3.6	-0.4	4.0	0.1
1986-1987	3.0	3.2	3.0	3.2	2.8	-0.4	3.0	-0.3	3.2	0.2
1987-1988	2.3	2.4	2.3	2.3	1.7	-0.6	2.1	-0.2	2.0	-0.3
1988-1989	2.8	2.9	2.8	2.9	1.7	-1.2	1.0	-1.9	1.8	-1.1
1989-1990	2.6	2.6	2.6	2.6	2.5	-0.2	2.1	-0.6	2.7	0.2
1990-1991	1.6	1.7	1.5	1.7	2.8	1.2	2.0	0.3	2.9	1.3
1991-1992	0.8	0.9	0.7	0.9	2.5	1.8	1.5	0.6	1.9	1.2
1992-1993	0.2	0.4	0.2	0.3	1.3	1.0	1.3	1.1	1.1	0.8
1993-1994	0.8	0.9	0.8	0.9	0.5	-0.3	0.6	-0.3	0.5	-0.4
1994-1995	2.1	2.1	2.1	2.1	1.0	-1.1	0.6	-1.5	0.5	-1.6
1995-1996	2.3	2.3	2.3	2.3	2.6	0.3	2.5	0.1	2.6	0.3
1996-1997	2.4	2.4	2.3	2.4	1.8	-0.5	1.7	-0.6	2.1	-0.3
1997-1998	3.7	3.8	3.7	3.8	2.0	-1.6	2.1	-1.6	2.1	-1.5
1998-1999	3.8	4.0	3.8	3.9	2.8	-1.0	2.7	-1.1	2.6	-1.2
Statistics for 1976-1998										
Mean error	*	*	*	*	*	-0.1	*	-0.6	*	*
Mean absolute error	*	*	*	*	*	1.0	*	1.0	*	*
Root mean square error	*	*	*	*	*	1.2	*	1.4	*	*
Statistics for 1982-1998										
Mean error	*	*	*	*	*	-0.3	*	-0.7	*	-0.4
Mean absolute error	*	*	*	*	*	0.9	*	0.9	*	0.8
Root mean square error	*	*	*	*	*	1.1	*	1.1	*	1.0

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTES: Values are for the appropriate three-month Treasury bill rate discounted by the respective forecast for inflation as measured by the change in the consumer price index. CBO forecast the secondary-market rate; the Administration forecast the new-issue rate. *Blue Chip* alternated between the two rates, forecasting the new-issue rate from 1982 to 1985, the secondary-market rate from 1986 to 1991, and the new-issue rate again beginning in 1992. Moreover, for most years since 1979, CBO forecast the CPI-U (the consumer price index for all urban consumers); from 1986 through 1989, however, CBO forecast the CPI-W (the consumer price index for urban wage earners and clerical workers). The Administration forecast the CPI-W until 1992, when it switched to the CPI-U. *Blue Chip* forecast the CPI-U for the entire period. All forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Two-year forecasts for the *Blue Chip* consensus were not available until 1982.

Table B-8.
Comparison of CBO and Administration Forecasts of the Two-Year Change in Wage and Salary Disbursements Plus Corporate Book Profits as a Share of Output (By calendar year, in percent)

		CBO		Administration	
	Actual	Forecast	Error	Forecast	Error
1980-1981	-3.2	-0.6	2.5	-1.3	1.9
1981-1982	-3.3	-2.6	0.7	-1.2	2.1
1982-1983	-1.9	-1.8	0.1	-1.7	0.2
1983-1984	-0.8	0	0.8	-1.0	-0.2
1984-1985	-0.5	-0.2	0.3	-0.2	0.4
1985-1986	-0.7	-0.6	0.1	-0.8	-0.1
1986-1987	1.2	1.0	-0.2	0.8	-0.4
1987-1988	2.5	0.9	-1.6	1.4	-1.1
1988-1989	-0.4	0.6	1.0	0.4	0.8
1989-1990	-1.2	0.4	1.5	0.7	1.9
1990-1991	-0.1	0.7	0.7	1.4	1.5
1991-1992	0	0.1	0	-0.1	-0.1
1992-1993	0	1.0	1.0	1.4	1.4
1993-1994	-0.3	0.5	0.9	0.5	0.9
1994-1995	1.2	0.2	-1.0	0.4	-0.8
1995-1996	1.7	-0.3	-2.0	-0.6	-2.3
1996-1997	1.1	-0.3	-1.5	0.8	-0.3
1997-1998	0.8	-0.6	-1.5	0	-0.8
1998-1999	0.5	-0.5	-0.9	0.2	-0.3
Statistics for 1980-1998					
Mean error	*	*	0.1	*	0.2
Mean absolute error	*	*	1.0	*	0.9
Root mean square error	*	*	1.2	*	1.2

SOURCES: Congressional Budget Office; Office of Management and Budget; Department of Commerce, Bureau of Economic Analysis.

NOTES: The forecasts were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are forecast values minus actual values; thus, a positive error is an overestimate. For the forecasts made between 1980 and 1991, gross national product was used in calculating the shares; for the forecasts made in 1992 and later, gross domestic product was used.

* = not applicable.

Table B-9.
Comparison of CBO, Administration, and *Blue Chip* Projections of Five-Year Average Growth Rates for Real Output (By calendar year, in percent)

	Actual				CBO		Administration		*Blue Chip*	
	1972 Dollars	1982 Dollars	1987 Dollars	Chain-Type Annual-Weighted Index	Projection	Error	Projection	Error	Projection	Error
GNP										
1976-1980	4.2	3.4	3.3	3.8	5.7	1.9	6.2	2.4	a	a
1977-1981	3.1	2.8	2.6	3.1	5.3	2.2	5.1	2.0	a	a
1978-1982	1.6	1.4	1.2	1.8	4.8	3.0	4.8	3.0	a	a
1979-1983	1.3	1.0	1.1	1.5	3.8	2.2	3.8	2.3	3.1	1.6
1980-1984	2.1	1.9	1.7	2.2	2.4	0.2	3.0	0.8	2.5	0.3
1981-1985	b	2.6	2.4	3.0	2.8	-0.2	3.8	0.8	3.0	0
1982-1986	b	2.7	2.6	3.2	3.0	-0.2	3.9	0.7	2.7	-0.4
1983-1987	b	4.0	3.7	4.3	3.6	-0.7	3.5	-0.8	3.5	-0.8
1984-1988	b	4.1	3.7	4.3	4.0	-0.3	4.3	0	3.5	-0.8
1985-1989	b	3.3	3.1	3.6	3.4	-0.2	4.0	0.4	3.4	-0.2
1986-1990	b	2.8	2.7	3.2	3.3	0.1	3.8	0.6	3.1	-0.1
1987-1991	b	c	2.0	2.5	2.9	0.4	3.5	1.0	2.7	0.2
1988-1992	b	c	1.9	2.4	2.6	0.2	3.2	0.8	2.5	0.1
1989-1993	b	c	1.7	2.1	2.3	0.2	3.2	1.1	2.6	0.5
1990-1994	b	c	1.9	2.2	2.3	0.1	3.0	0.8	2.4	0.2
1991-1995	b	c	d	2.3	2.3	0	2.5	0.2	2.0	-0.3
GDP[e]										
1992-1996	b	c	d	3.2	2.6	-0.6	2.7	-0.5	2.5	-0.7
1993-1997	b	c	d	3.4	2.8	-0.7	2.8	-0.7	2.8	-0.6
1994-1998	b	c	d	3.1	2.7	-0.4	2.8	-0.4	2.8	-0.3
1995-1999	b	c	d	3.1	2.4	-0.8	2.6	-0.6	2.5	-0.6
Statistics for 1976-1995										
Mean error	*	*	*	*	*	0.3	*	0.7	*	*
Mean absolute error	*	*	*	*	*	0.7	*	1.0	*	*
Root mean square error	*	*	*	*	*	1.1	*	1.3	*	*
Statistics for 1979-1995										
Mean error	*	*	*	*	*	0	*	0.4	*	-0.1
Mean absolute error	*	*	*	*	*	0.4	*	0.7	*	0.5
Root mean square error	*	*	*	*	*	0.7	*	0.9	*	0.6

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are for the five-year growth rates for real gross national product (GNP) and gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Projected values are for the average growth of real GNP or GDP over the five-year period. The majority of the projections were issued in the first quarter of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are projected values minus actual values; thus, a positive error is an overestimate. The chain-type annual-weighted index of actual GNP or GDP was used in calculating the errors.

* = not applicable.

a. Five-year projections for the *Blue Chip* consensus were not available until 1979.

b. Data for 1972-dollar GNP and GDP are available only through the third quarter of 1985.

c. Data for 1982-dollar GNP and GDP are available only through the third quarter of 1991.

d. Data for 1987-dollar GNP and GDP are available only through the second and third quarters, respectively, of 1995.

e. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.

Table B-10.
Comparison of CBO, Administration, and *Blue Chip* Projections of Five-Year Average Growth Rates for Nominal Output (By calendar year, in percent)

	Actual	CBO		Administration		*Blue Chip*	
		Projection	Error	Projection	Error	Projection	Error
GNP							
1976-1980	11.4	12.3	0.9	12.0	0.5	a	a
1977-1981	11.5	10.6	-0.9	10.5	-1.0	a	a
1978-1982	9.9	10.7	0.8	10.6	0.7	a	a
1979-1983	9.0	11.3	2.2	9.6	0.6	a	a
1980-1984	8.8	11.3	2.5	11.3	2.5	a	a
1981-1985	8.4	11.8	3.4	11.3	2.9	a	a
1982-1986	7.1	9.8	2.6	9.7	2.6	9.7	2.5
1983-1987	7.6	8.2	0.6	8.5	0.9	9.0	1.4
1984-1988	7.5	9.0	1.5	8.9	1.4	9.1	1.6
1985-1989	6.8	7.7	0.9	8.1	1.3	7.8	1.0
1986-1990	6.6	7.5	0.9	7.4	0.8	7.0	0.4
1987-1991	6.1	6.9	0.8	6.9	0.8	6.6	0.5
1988-1992	5.9	6.6	0.7	6.7	0.8	6.6	0.7
1989-1993	5.4	6.6	1.2	6.5	1.1	6.9	1.5
1990-1994	5.1	6.3	1.2	6.9	1.8	6.4	1.3
1991-1995	4.9	6.1	1.2	6.4	1.5	5.9	1.0
GDP[b]							
1992-1996	5.5	5.8	0.3	6.0	0.5	5.9	0.4
1993-1997	5.6	5.1	-0.5	5.1	-0.5	6.0	0.4
1994-1998	4.9	5.4	0.5	5.7	0.8	5.8	0.9
1995-1999	4.7	5.2	0.5	5.5	0.8	5.6	0.9
Statistics for 1976-1995							
Mean error	*	*	1.1	*	1.0	*	*
Mean absolute error	*	*	1.2	*	1.2	*	*
Root mean square error	*	*	1.5	*	1.4	*	*
Statistics for 1982-1995							
Mean error	*	*	0.9	*	1.0	*	1.0
Mean absolute error	*	*	1.0	*	1.1	*	1.0
Root mean square error	*	*	1.1	*	1.2	*	1.2

SOURCES: Congressional Budget Office; Office of Management and Budget; Aspen Publishers, Inc., *Blue Chip Economic Indicators*; Department of Commerce, Bureau of Economic Analysis.

NOTES: Actual values are for the five-year growth rates for gross national product (GNP) and gross domestic product (GDP) last reported by the Bureau of Economic Analysis, not the first reported values. Projected values are for the average annual growth of nominal GNP or GDP over the five-year period. The projections were issued in the first half of the initial year of the period or in December of the preceding year. Errors (which are in percentage points) are projected values minus actual values; thus, a positive error is an overestimate.

* = not applicable.

a. Five-year projections for the *Blue Chip* consensus were not available until 1982.

b. With the 1992 benchmark revision, GDP replaced GNP as the central measure of national output.

Appendix C

The Federal Sector of the National Income and Product Accounts

The federal budget is not the only mechanism for gauging the effect of federal government revenues and spending on the economy. That effect is also measured in the official national income and product accounts (NIPAs) produced by the Commerce Department's Bureau of Economic Analysis (BEA). The NIPAs provide a picture of government activity in terms of production, distribution, and use of output. They recast the government's transactions into categories that affect gross domestic product (GDP), income, and other macroeconomic totals, thereby helping to trace the relationship between the federal sector and other areas of the economy.

Because of the uncertain direction of policy related to discretionary spending, the Congressional Budget Office (CBO) has used three different assumptions about the path of that spending. The numbers in Tables C-1 and C-2 reflect CBO's inflated version of the baseline, in which discretionary spending grows with inflation from 2001 through 2010. CBO also presents a capped version of the baseline, in which discretionary spending equals CBO's estimates of the statutory caps through 2002 and grows with the rate of inflation thereafter, as well as a baseline variant that freezes budget authority for discretionary programs at the level in 2000 (see Chapter 1 for further details). CBO has not translated those other two baseline versions into NIPA terms; however, the lower projected discretionary spending in each would result in lower projections of defense purchases, nondefense purchases, and grants in the NIPAs. Net interest costs would also be lower under those two baseline variants because of reduced levels of debt.

Relationship Between the Budget and the NIPAs

A number of major differences distinguish the treatment of federal receipts and expenditures in the NIPAs from their treatment in the total budget. For example, the NIPAs shift certain items from the spending to the receipt side of the ledger to reflect intrabudgetary or voluntary payments that the budget records as negative outlays. Such shifts are referred to as *netting and grossing* adjustments and do not affect the surplus or deficit (see Table C-1).

In contrast, other differences between the NIPAs and the federal budget do affect the surplus or deficit. The NIPA totals exclude government transactions that involve the transfer of existing assets and liabilities and therefore do not contribute to current income and production. Prominent among such *lending and financial* adjustments are those for deposit insurance outlays, cash flows for direct loans made by the government before credit reform, and sales of government assets. Other factors that separate NIPA accounting from budget accounting include *geographic adjustments* (the exclusion of Puerto Rico, the Virgin Islands, and a few other areas from the national economic statistics) and *timing adjustments* (such as correcting for irregular numbers of benefit checks or paychecks in the budget because certain pay dates fall on a weekend or holiday).

In the NIPAs, *contributions for government employee retirement* are considered the personal income of federal workers who are covered by the retirement funds. In the budget, those contributions are classified as government receipts. Therefore, on a NIPA basis, outlays from the funds are treated as transactions outside of the government sector of the economy.

Capital transfers, which include grants to state and local governments for highways, transit, air transportation, and water treatment plants, are transactions in which one party provides something (usually cash) to another without receiving anything in return. Those transactions are linked to, or are conditional upon, the acquisition or disposition of an asset. Because such transactions transfer existing assets from one party to another, they do not affect disposable income or production in the current period and are therefore not counted in the NIPAs.

The NIPAs and the total budget also differ in their *treatment of investment and capital consumption*. The total budget reflects all expenditures of the federal government, including investment purchases of items such as buildings and aircraft carriers. The NIPAs show the current, or operating, account for the federal government; consequently, they exclude government investment and include the government's consumption of fixed capital (depreciation). (Government investment, though included in the calculation of GDP, is not included in the calculation of budget outlays and is therefore not part of the government sector of the NIPAs).

NIPA Receipts and Expenditures

The federal sector of the NIPAs generally classifies receipts according to their source (see Table C-2). The leading source of government receipts in the 2000-2010 period is taxes and fees paid by individuals. Following that category are contributions (including premiums) for social insurance, such as Social Security, Medicare, unemployment insurance, and federal employees' retirement. The remaining categories are corporate profit tax accruals, including the earnings of the Federal Reserve System, and indirect business tax and nontax accruals (chiefly excise taxes and fees).

Government expenditures are classified according to their purpose and destination. Defense and nondefense consumption of goods and services represents purchases made by the government for immediate use. The largest share of current consumption is compensation of federal employees. Consumption of fixed government capital is the use the government gets from its fixed assets.

Transfer payments are cash payments made directly to people or foreign nations. Grants-in-aid are payments that the federal government makes to state or local governments, which then use them for transfers (such as paying Medicaid benefits), consumption (such as hiring additional police officers), or investment (such as building highways).

Although both the total budget and the NIPAs contain a category labeled "net interest," the NIPA figure is bigger. Various differences cause the two measures to diverge. The largest difference is the contrasting treatment of interest received by the Civil Service and Military Retirement funds. In the total budget, such receipts offset the payments made by the Treasury. In the NIPAs, however, those receipts are classified as contributions to personal income and do not appear on the government ledger.

The NIPA category labeled "subsidies less current surplus of government enterprises" contains two components, as its name suggests. The first—subsidies—is defined as monetary grants paid by government to businesses, including state and local government enterprises. Subsidies are dominated by housing assistance.

The second part of the category is the current surplus of government enterprises, which are certain business-type operations of the government, such as the Postal Service. The operating costs of government enterprises are mostly covered by the sale of goods and services to the public rather than by tax receipts. The difference between sales and current operating expenses is the enterprise's surplus or deficit. *Government enterprises* should not be confused with *govern-*

ment-sponsored enterprises (GSEs), which are private entities established and chartered by the federal government to perform specific financial functions, usually under the supervision of a government agency. Examples of GSEs include Fannie Mae and the Farm Credit System. As privately owned organizations, GSEs are not included in the budget or in the federal sector of the NIPAs.

Table C-1.
Relationship of the Budget to the Federal Sector of the National Income and Product Accounts (By fiscal year, in billions of dollars)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Receipts												
Revenue (Budget basis)[a]	1,827	2,008	2,109	2,202	2,290	2,380	2,486	2,594	2,706	2,826	2,960	3,102
Differences												
Netting and grossing												
Medicare premiums	22	22	23	25	28	31	34	38	41	44	48	52
Deposit insurance premiums	*	*	*	*	*	*	*	*	*	*	*	*
Other	5	5	2	1	*	-2	-2	-4	-4	-5	-6	-7
Geographic adjustments	-3	-3	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5
Contributions for government employee retirement	-4	-5	-5	-5	-4	-4	-4	-4	-4	-4	-4	-3
Excise timing adjustments	-5	0	0	0	0	0	0	0	0	0	0	0
Universal Service Fund receipts	-4	-5	-5	-5	-7	-11	-12	-12	-12	-12	-12	-12
Estate and gift taxes	-28	-30	-32	-34	-36	-38	-38	-40	-41	-44	-47	-49
Other	29	-2	14	4	-2	*	*	*	1	1	2	2
Total	12	-17	-6	-18	-25	-28	-26	-26	-24	-24	-23	-22
Receipts (NIPA basis)	1,839	1,991	2,103	2,185	2,266	2,352	2,459	2,568	2,681	2,802	2,938	3,080
Expenditures												
Outlays (Budget basis)[a]	1,703	1,776	1,841	1,890	1,946	2,011	2,084	2,125	2,183	2,261	2,336	2,417
Differences												
Netting and grossing												
Medicare premiums	22	22	23	25	28	31	34	38	41	44	48	52
Deposit insurance premiums	*	*	*	*	*	*	*	*	*	*	*	*
Other	5	5	2	1	*	-2	-2	-4	-4	-5	-6	-7
Geographic adjustments	-9	-10	-11	-11	-12	-12	-13	-13	-14	-15	-15	-16
Lending and financial transactions	10	7	14	14	15	12	11	12	14	13	13	12
Contributions for government employee retirement	45	46	48	50	52	54	56	57	59	61	63	66
Capital transfers	-31	-33	-35	-37	-39	-40	-40	-41	-41	-42	-42	-43
Treatment of investment and capital consumption	-7	-11	-10	-10	-13	-17	-20	-23	-27	-30	-34	-37
Defense timing adjustment	1	-1	3	0	0	0	0	0	0	0	0	0
Mandatory timing adjustments	0	2	-5	3	0	0	-14	5	8	0	0	0
Universal Service Fund payments	-3	-4	-5	-5	-6	-11	-12	-12	-12	-12	-12	-12
Other	3	*	2	1	2	2	2	2	2	2	3	3
Total	34	23	24	31	27	18	2	21	26	18	17	18
Expenditures (NIPA basis)	1,737	1,799	1,866	1,921	1,972	2,029	2,086	2,146	2,209	2,278	2,353	2,435

Table C-1.
Continued

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
						Surplus						
Surplus (Budget basis)[a]	124	232	268	312	345	369	402	469	523	565	625	685
Differences												
Geographic adjustments	6	7	7	8	8	8	9	9	10	10	11	11
Lending and financial transactions	-10	-7	-14	-14	-15	-12	-11	-12	-14	-13	-13	-12
Contributions for government employee retirement	-49	-51	-53	-55	-56	-58	-60	-61	-63	-65	-67	-69
Capital transfers	31	33	35	37	39	40	40	41	41	42	42	43
Treatment of investment and capital consumption	7	11	10	10	13	17	20	23	27	30	34	37
Defense timing adjustment	-1	1	-3	0	0	0	0	0	0	0	0	0
Excise and other timing adjustments	-5	-2	5	-3	0	0	14	-5	-8	0	0	0
Universal Service Fund payments	*	*	*	*	-1	-1	*	*	*	*	*	*
Estate and gift taxes	-28	-30	-32	-34	-36	-38	-38	-40	-41	-44	-47	-49
Other	26	-2	12	3	-4	-2	-2	-2	-2	-2	*	*
Total	-22	-41	-31	-49	-51	-45	-28	-47	-51	-42	-40	-40
Surplus (NIPA basis)	102	192	237	263	293	324	373	422	472	523	584	645

SOURCE: Congressional Budget Office.

NOTES: These numbers reflect the inflated version of CBO's baseline, which assumes that discretionary spending grows at the rate of inflation after 2000.

* = between -$500 million and $500 million.

a. Includes Social Security and the Postal Service.

Table C-2.
Projections of Baseline Receipts and Expenditures Measured by the National Income and Product Accounts (By fiscal year, in billions of dollars)

	Actual 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Receipts												
Personal Tax and Nontax Receipts	886	970	1,047	1,100	1,147	1,193	1,247	1,304	1,365	1,434	1,508	1,589
Corporate Profit Tax Accruals	214	242	236	222	217	224	233	243	251	259	268	276
Indirect Business Tax and Nontax Accruals	100	106	107	111	114	115	118	121	124	128	133	137
Contributions for Social Insurance	638	673	713	752	788	819	861	900	941	981	1,029	1,078
Total	1,839	1,991	2,103	2,185	2,266	2,352	2,459	2,568	2,681	2,802	2,938	3,080
Expenditures												
Purchases of Goods and Services												
Defense												
Consumption	243	251	266	271	279	287	298	303	309	320	329	338
Consumption of fixed capital	62	63	64	65	65	66	66	66	67	67	68	69
Nondefense												
Consumption	139	147	155	156	158	161	162	163	165	168	170	173
Consumption of fixed capital	22	25	27	28	30	31	33	34	36	37	39	41
Subtotal	467	486	512	520	533	545	559	567	576	593	606	621
Transfer Payments												
Domestic	737	750	790	835	883	932	981	1,038	1,099	1,158	1,225	1,300
Foreign	11	8	9	10	10	10	11	11	11	11	11	11
Subtotal	748	758	799	845	893	943	992	1,049	1,110	1,168	1,236	1,311
Grants-in-Aid to State and Local Governments	221	240	259	273	287	304	321	339	359	381	404	430
Net Interest[a]	266	265	257	242	217	195	172	148	120	91	59	24
Subsidies Less Current Surplus of Government Enterprises	36	50	39	42	43	43	43	43	44	46	48	50
Total	1,737	1,799	1,866	1,921	1,972	2,029	2,086	2,146	2,209	2,278	2,353	2,435
Surplus												
Surplus	102	192	237	263	293	324	373	422	472	523	584	645

SOURCE: Congressional Budget Office.

NOTE: These numbers reflect the inflated version of CBO's baseline, which assumes that discretionary spending grows at the rate of inflation after 2000.

a. Includes proceeds from investing excess cash.

Appendix D

CBO's Economic Projections for 2000 Through 2010

Year-by-year economic projections for 2000 through 2010 are shown in the accompanying tables (by calendar year in Table D-1 and by fiscal year in Table D-2). CBO did not try to explicitly incorporate cyclical recessions and recoveries in its projections for the 2002-2010 period. Instead, the projected values reflect CBO's assessment of their averages for the period—which take into account potential ups and downs in the business cycle.

Table D-1.
Comparison of CBO's July and January 2000 Economic Projections for Calendar Years 2000-2010

	Actual	Forecast		Projected								
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nominal GDP (Billions of dollars)												
July 2000	9,256	9,907	10,433	10,940	11,449	11,965	12,508	13,077	13,673	14,298	14,967	15,675
January 2000	9,235	9,692	10,154	10,610	11,069	11,544	12,054	12,589	13,148	13,734	14,362	15,024
Nominal GDP (Percentage change)												
July 2000	5.7	7.0	5.3	4.9	4.6	4.5	4.5	4.6	4.6	4.6	4.7	4.7
January 2000	5.4	5.0	4.8	4.5	4.3	4.3	4.4	4.4	4.4	4.5	4.6	4.6
Real GDP[a] (Percentage change)												
July 2000	4.2	4.9	3.1	2.7	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.9
January 2000	3.9	3.3	3.1	2.8	2.6	2.6	2.7	2.7	2.7	2.7	2.9	2.9
GDP Price Index[b] (Percentage change)												
July 2000	1.4	2.1	2.1	2.1	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
January 2000	1.4	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Consumer Price Index[c] (Percentage change)												
July 2000	2.2	3.1	2.7	2.9	2.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
January 2000	2.2	2.5	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Unemployment Rate (Percent)												
July 2000	4.2	3.8	3.7	4.1	4.4	4.7	4.8	5.0	5.1	5.2	5.2	5.2
January 2000	4.2	4.1	4.2	4.4	4.7	4.8	5.0	5.0	5.1	5.2	5.2	5.2
Three-Month Treasury Bill Rate (Percent)												
July 2000	4.6	5.9	6.7	5.5	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
January 2000	4.6	5.4	5.6	5.3	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Ten-Year Treasury Note Rate (Percent)												
July 2000	5.6	6.5	6.8	6.3	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7
January 2000	5.6	6.3	6.4	6.1	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Tax Bases (Billions of dollars)												
Corporate profits[d]												
July 2000	849	914	881	839	844	873	903	937	968	1,001	1,041	1,076
January 2000	840	829	833	829	839	860	885	919	954	991	1,028	1,060
Wages and salaries												
July 2000	4,472	4,769	5,061	5,336	5,582	5,814	6,065	6,332	6,613	6,911	7,230	7,568
January 2000	4,475	4,732	4,959	5,183	5,408	5,641	5,890	6,150	6,422	6,706	7,009	7,328

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

NOTE: Percentage changes are year over year.

a. Based on chained 1996 dollars.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

d. Corporate profits are book profits.

Table D-2.
CBO's Year-by-Year Economic Projections for Fiscal Years 2000-2010

	Actual	Forecast		Projected								
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nominal GDP (Billions of dollars)	9,116	9,758	10,303	10,814	11,322	11,834	12,370	12,933	13,521	14,137	14,797	15,495
Nominal GDP (Percentage change)	5.6	7.0	5.6	5.0	4.7	4.5	4.5	4.6	4.6	4.6	4.7	4.7
Real GDP[a] (Percentage change)	4.2	5.1	3.4	2.8	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.9
GDP Price Index[b] (Percentage change)	1.3	1.9	2.2	2.1	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8
Consumer Price Index[c] (Percentage change)	1.9	3.0	2.7	2.9	2.8	2.6	2.5	2.5	2.5	2.5	2.5	2.5
Unemployment Rate (Percent)	4.3	3.9	3.7	4.0	4.3	4.6	4.8	5.0	5.1	5.2	5.2	5.2
Three-Month Treasury Bill Rate (Percent)	4.4	5.6	6.6	5.8	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Ten-Year Treasury Note Rate (Percent)	5.3	6.4	6.8	6.5	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Tax Bases (Billions of dollars)												
Corporate profits[d]	819	910	892	846	837	866	895	929	960	992	1,032	1,066
Wages and salaries	4,403	4,694	4,988	5,269	5,524	5,755	6,001	6,264	6,542	6,834	7,148	7,482
Tax Bases (Percentage of GDP)												
Corporate profits[d]	9.0	9.3	8.7	7.8	7.4	7.3	7.2	7.2	7.1	7.0	7.0	6.9
Wages and salaries	48.3	48.1	48.4	48.7	48.8	48.6	48.5	48.4	48.4	48.3	48.3	48.3

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board; Department of Labor, Bureau of Labor Statistics.

NOTE: Percentage changes are year over year.

a. Based on chained 1996 dollars.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

d. Corporate profits are book profits.